VITEK

CHRONO Series

8 and 16 Channel Digital Video Recorders

- Highly efficient H.264 compression
- Built-in Data Redundancy
- Real-time recording and real-time playback
- System Setup Wizard and User Friendly GUI
- Multi-Resolution recording
- 4 Spot Output (16 Channel Version)
- Highly efficient and stable proprietary Database Structure
- Identical GUI for DVR and client viewer
- Built-in Point-of-Sales support
- Web Client & CMS (Central Management Software) Included
- iPhone Client

Preface

We welcome you as a new user of the world's best digital video recorder (DVR), and the leading Digital Video Surveillance System. For effective usage, please read this manual carefully. For future reference, please keep this manual close to hand.

Copyright/Authentication/Trademark/Limited Warranty

Copyright

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CE, FCC, KCC

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Cautions

We strongly recommend that users read all safety cautions carefully before operating the product.
Since the indicated cautions contain critical safety information, they must be fully complied with. The cautions are categorized into Danger, Warning, Caution and Important.

Danger	Risk of death or serious injury. This is the highest priority danger warning.
Warning	Risk of serious or lesser degree of injury. May also cause damage to the product or to property.
Caution	Risk of minor injury or damage.
Important	Requirements or limitations regarding operation. Users are recommended to read the relevant details carefully so as to operate the product properly and without harm.

These cautions indicate the degree of damage that may occur due to inappropriate use of the system.

Danger	Risk of death or serious injury. This is the highest priority danger warning.

- RISK OF EXPLOSION IF BATTERY IS REPLACED WITH INCORRECT TYPE. DISPOSE OF USED BATTERY ACCORDING TO THE INSTRUCTIONS.
- THIS EQUIPMENT IS FOR INDOOR USE AND ALL THE COMMUNICATION WIRINGS ARE LIMITED TO INSIDE OF THE BUILDING.
- Please connect the power cord only to the type of AC outlet indicated in the manual or product specification. If connected to other types of power outlet, fire and electric shock may result.
- Do not expose the product to moisture and dampness. Doing so may result in fire and electric shock.
- Do not place heavy objects on top of the power cord. Damage to the power cord may result in fire and electric shock.

- Do not place containers with liquid or small metal objects on top of the product. Liquid or small metal objects getting into the unit may lead to fire and electric shock.
- Do not score, bend, twist, pull or heat the power cord. Damage to the power cord may lead to fire and electric shock.
- Do not remove the top casing of the product. Doing so may result in electric shock. If internal examination and maintenance are deemed necessary, contact the authorized system vendors or installers.
- Do not modify the product in any way. Doing so may lead to fire and electric shock.
- In case of lightning, immediately turn off the power switch and remove the power cord from the power outlet. Failure to do so may result in fire and electric shock.
- Please use only the power cord supplied with the product. Use of other power cords may result in fire and electric shock.
- In case of smoke, smell or noise, immediately turn off the power switch and remove the power cord from the power outlet. Continued operation of the product may result in fire and electric shock. Request a maintenance service from the authorized system vendors or installers.
- If the product is dropped or damaged, turn off the power switch and remove the power cord from the power outlet. Continued operation of the product may result in fire and electric shock. Users should request a maintenance service from the authorized system vendors or installers.
- Do not touch the product with wet hands. Doing so may result in electric shock.

Warning	Risk of serious or lesser degree of injury. May also cause damage to the product or to property.

- Do not leave the power cord or other cables in passageways. Passers-by may trip and fall.
- Avoid contact with water or beverages. Contact with water or beverages may result in damage that cannot be repaired.
- In case of lightning, immediately turn off the power switch and remove the power cord from the power outlet. The product may otherwise be damaged.
- Excessive current from the product and the camera may result in an electric shock. Connect the power cord to an external device only when the products themselves are disconnected from their power supply.

Caution	Risk of minor injury or damage.

- If a foreign substance is stuck to the product, remove it using a soft cloth or tissue. Do not use chemical agents (thinner, solvent, etc.) to remove the substance.
- Do not operate or store the product in the following places:
  - An area that is either too cold or too hot
  - An area of high humidity, in front of an air-conditioner, or in places subject to sudden temperature changes
  - An area where there is excessive dust
  - Areas where heat from the product cannot be emitted through both of the product's side ventilation openings
- Do not place credit cards/telephone cards/bank account books/tickets and other objects with magnetic properties near the product.
- Static electricity may cause damage to the internal parts of the product. Please remove static electricity from your body before touching the rear panel and internal electronic parts of the product.
- If this product is damaged beyond repair or reaches its maximum service life, dispose of it in compliance with local laws and regulations regarding the disposal of lead and plastic waste.

Important	Requirements or limitations regarding operation. Users are recommended to read the relevant details carefully so as to operate the product properly and without harm.

- The product may not work properly if the power source is unstable or and if electric shock occurs. Make sure the correct rated power is available.
- The product is designed to continue working despite electric power failures; however, damage may occur as a result of power failure. Current data may be damaged or data might not be recorded. Make sure to use an Uninterruptible Power Supply (UPS).
- Since the product is designed to record video data on the hard disk, an error in the hard disk or other miscellaneous errors might prevent the product from recording properly. Periodic maintenance is required for proper operation of the product.
- The product is designed for users to configure their own interface. However a user configuration error could lead to operation malfunction. This product should be set up by certified installers only.
- Since the product is connected - and tightly coupled - to exterior accessories (camera, sensor, LAN, Hard Disk, etc.), there is a risk of malfunction from external causes. Ensure periodic maintenance by the certified installers.
- Use the rack mounting handle provided with the product for installation.
- In this product, 1 Kbyte equals 1,024 bytes, 1 Mbyte equals 1,024,000 bytes and 1 Gbyte equals 1,024,000,000 bytes.

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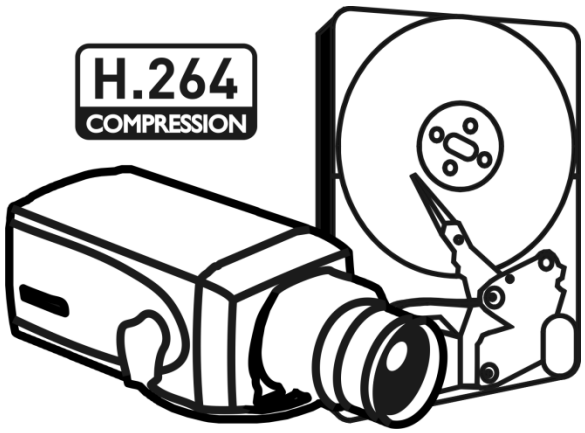
Chapter 1. Introduction

1. General Features

- True H.264 Standard Video Compression
- Embedded Linux System to give you the Ultimate Reliability
- Dedicated DB Structure for Stability
- Various Recording Resolution D1/Half D1/CIF
- CMS (Central Monitoring System)
- Easy Setup same like DVR GUI in CMS
- Web Monitoring, Searching and Setup
- Own Media Player for Backup Playback
- Four USB Port for Mouse operation, Multi USB Hub and Backup (Two USB Port in 4Ch.DVR)
- Up to Four SATA HDD and No Limitation of Capacity (Up to Two SATA HDD in 4Ch.DVR)
- Two- Way Audio
- Multiple DVRs can be operated with One Keyboard Controller
- Text-In & Relay Output Support
- Real Time Recording and Multi Ch. Playback
- 8/16 Audio Input (4 Mic Input) support (4 Line-In in 4Ch.DVR)
- Archiving Function to Secure the High Stability for Recorded Data
- 4 Spot Output with Event Pop up Function (1 Spot Output in 4Ch.DVR)



Chapter 2. System Installation

1. Package Contents

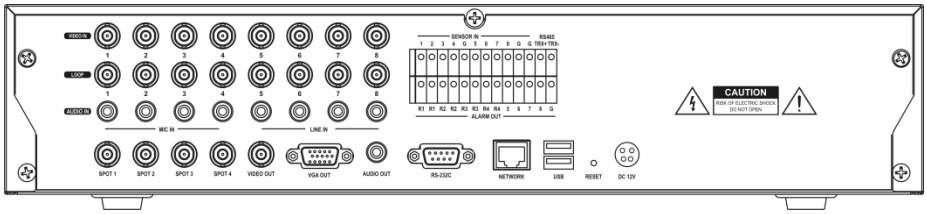
The following components are included with the product:

CHRONO Series DVR	
DC Adaptor	
Power Cord	
CD (User's Manual & Network S/W)	
VT-CN-REMOTE	
Quick Guide	

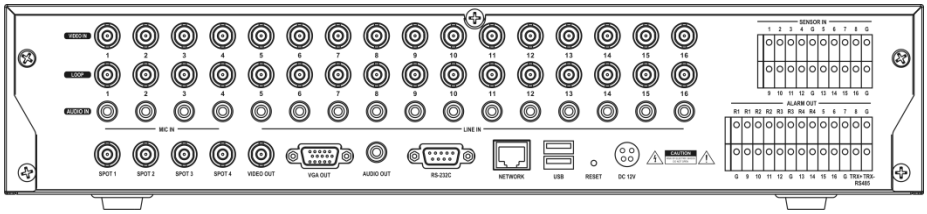
2. Connecting Devices

The rear panels of the CHRONO Series DVR appear as:

[VT-CN840]



[VT-CN1680]



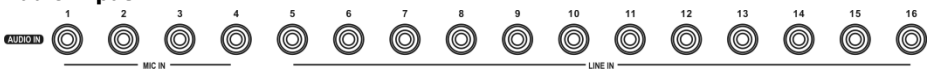
Video Input

Connect the coaxial cables from the cameras to the BNC video connectors.

Loop-Through Video

Connect the coaxial cables from the Loop BNC connector to another device.

Audio Input



The DVR can record audio of up to 16 (or 8) sources. Connect the audio sources to the Audio-In RCA connectors. 1~4 Channel connectors have internal pre-amplifiers for directly connecting microphones and other channels need external pre-amplifiers.
It is the user's responsibility to determine if local laws and regulations permit recording audio.

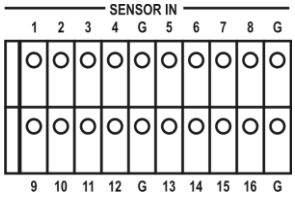
Video Output

Connect the main monitor to either the Video Out (CVBS) or VGA out connector. Connect the spot monitors to the SPOT 1~4 connectors as needed.

ETC

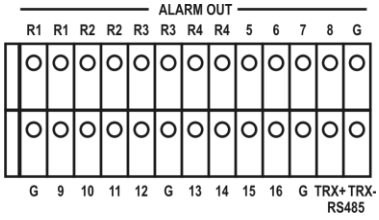
- **Audio Out**: The DVR does not have amplified audio output, so you will need a speaker with an amplifier.
- **RS-232C**: An RS-232C connector is provided to connect an ATM or POS machine for Text-In function. Use a cable with a DB9 (female) connector to connect to the DVR.
- **Network**: Connect a Cat5 cable with an RJ-45 connector to the DVR connector for remote monitoring, remote playback, remote setup. See ***Chapter 3-2. DVR Configuration*** for configuring the Network connections.
- **USB**: Four USB ports are provided to connect external devices like HDD, Flash memory for Backup, System upgrade or USB mouse. Two USB ports are located on the rear panel and the other two are on the front panel. A USB mouse can only be connected to the front panel's USB port dedicated to the mouse.
- **Reset**: The DVR has a Reset switch that will only be used to return all the settings to the original factory settings. First, turn off the DVR to reset the unit. Turn it on again while poking the straightened paperclip in the reset hole. Hold the switch until the DVR initializes.
- **Power Connector**: Connect the adapter cable to the power connector on the rear panel. (DC12V, 6.67A) Input AC power to the adapter. (Free voltage from 100V to 240V, 50/60Hz)

Sensor Input



16(8) sensor input connectors are provided to connect external devices. You can use sensors to signal the DVR of an event. To make connections on the terminal block, press and hold the button and insert the wire in the hole below the button.

Alarm Output & RS485



16(8) alarm output connectors are provided to connect external alarms such as sirens or lights. 4 alarm output connectors have internal relays and the others are TTL signals.
The RS485 connector can be used to control PTZ cameras. The DVR can also be controlled remotely by a control keyboard – VT-KBD1.

- **Front USB**: Two USB ports are provided to connect external devices like HDD, Flash memory for Backup, System upgrade or USB mouse on the front panel. A USB mouse can be connected only on the front panel USB port dedicated to the mouse.

Note: This manual covers CHRONO Series DVRs, VT-CN840 and VT-CN1680. The DVRs are identical except for the number of cameras, audio inputs and alarms. The illustrations and descriptions in this manual refer to VT-CN1680.

3. Caution

- Avoid installing the product where there are direct rays or where it is hot. Do not install near heat generator. (May cause fire)
- Do not put vase, flowerpot, cup, cosmetics, drugs, or anything else that contains water, on the product. (May cause fire or electric shock, and it may injure people by falling)
- Do not insert or drop any metal object (coin, hair pin) or flammable object (match, paper) into air hole. (May cause fire or electric shock)
- Do not put any heavy object on it. (May injure people by being fell or destroyed.)
- Place power plug where it will not to be moved. (If not, this may cause fire.)
- Unplug power plug and antenna when it thunders and lightenings. (May cause fire.)
- Wipe surface with dry towel to clean the product. Using chemical agent or cleaner may change the color and unpeel paint.
- Do not plug several plugs at the same time. (May cause electric shock.) If there is smoke or strange smell, stop operation. In this case, turn the power off, unplug it, and then contact our service center. (If you keep using it, this may cause fire or electric shock.)
- Do not unplug by pulling cord. (If cord is damaged, it may cause fire or electric shock.)
- Do not plug or unplug with wet hands. (May cause electric shock.)
- Keep the power cord untwisted. (May cause fire or electric shock.)
- Use proper adapter. (Using too much electric power may cause fire or electric shock.)
- Do not install where there is possible exposure to rain or wind. (May cause fire, electric shock and transformation.)
- Keep away from fire.
- Do not disassemble or remodel on your own. (May cause malfunction or electric shock.)
- Do not put next to flammable materials like flammable spray. (May cause fire.)
- Do not install it at a place with too much dirt. (May cause fire.)
- Do not install on unstable or inclined surfaces. (May injure users if falls down.)
- Do not put heavy object on the power cord. (May cause fire or electric shock.)
- Do not use several extension cords at once. (May cause fire with abnormal heating of extension.)
- Clean power plug pin and power outlet gently if they become dirty. (May cause fire.)
- Do not damage power cord or plug by bending, twisting, pulling, or putting it between other objects or heat. If power outlet insertion part is not tight, do not use it. (May cause fire or electric shock.)
- Do not drop or shock the product. (May injure people or cause malfunction.)
- Do not touch power adaptor or signal controller. (May cause electric shock.)
- Do not put any object too close or block the cooling fan. (May cause fire.)
- Do not exchange batteries with unapproved brand. (May cause explosion.)
- Dispose of used batteries separately from other garbage.
- Keep batteries away from children. If ingested, contact a doctor right away.

Chapter 3. Using DVR

1. Basic Operation

1-1. Front Panel & IR Remote Controller

The DVR should be correctly installed before proceeding. The location and the shape of the buttons may vary depending on the DVR model. (4-channel DVR - only most commonly used buttons will be found on the front panel.)

Control	Description
USB Port	Two USB ports are located on the front panel. A USB mouse may be connected to its dedicated USB port.
Camera Buttons (1~0)	Pressing camera buttons and Enter button will cause the selected camera to display full screen. Buttons are used to enter passwords.
MENU / EXIT Button	Enters the Setup Menu. User will need to enter the authorized password to access Setup. In Playback mode, MENU button displays the Playback Menu.
DISPLAY Button	Changes the screen display mode in the current screen or playback screen.
SEQUENCE Button	Displays live channels sequentially.
Up, Down, Left, Right Arrow, ENTER Buttons	These are used to change settings for the product in MENU mode or used in PTZ control mode. (pan, tilt)
BACKUP Button	Copies recorded data to an external storage device.
PLAYBACK Button	Changes to the playback mode from the live mode.
❚❚ PAUSE Button	Under playback mode, the button can be used to pause the playback screen. - Display menu to save PTZ preset under PTZ mode.
► PLAY Button	Plays the video forward. Press the button repeatedly to increase play speed up to max 32 times (1, 2, 4, 8, 16, 32 times) faster. Use this button to move right when setting the menu. - Focus on far distance under PTZ mode.
◄ R.PLAY Button	Plays the video backward. Press the button repeatedly to increase play speed up to max 32 times (1, 2, 4, 8, 16, 32 times) faster. Use this button to move right when setting the menu. - Zoom Out under PTZ mode.
❚► STEP FORWARD Button	Move forward by one frame under Pause. Use this button to move up when setting the menu. - Focus on near distance under PTZ mode.
◄❚ STEP BACKWARD Button	Move backward by one frame under Pause. Use this button to move down when setting the menu. - Zoom In under PTZ mode.
⏏ EJECT Button	It will open or close the backup drive such as CD-RW or DVD - Display menu to load PTZ presets under PTZ mode.
PTZ Button	Changes to the PTZ control mode from the live mode.

ZOOM Button	Zooms the current image on the screen.
PIP Button	Changes to PIP screen mode from live screen.
FREEZE Button	Freeze the current screen.
AUDIO Button	Selects a camera for live & playback audio output.
SPOT Button	Assigns the SPOT output channel.
OSD Button	Turns on/off the OSD display.
LOG Button	Checks the system's log information.
ID Button	Selects the DVR system ID. (Remote controller only)
E.REC Button	Pressing the E.REC button stars Emergency Recording Mode of all camera channels, and displays "!" on the screen. Pressing the button again will stop E.REC mode.
Status LED	Power, HDD, Network, Alarm

1-2. Turning on the System

Connecting the power cord will turn on the DVR. It will take approximately 10 to 30 seconds for the system to be initialized. Once the system is initialized, it will display a live screen, and begin to record video automatically.

Note: To turn off the system, select SHUTDOWN under main menu (MENU > SHUTDOWN) and unplug the power cord when the shutdown message appears.

Note: The HDD should be formatted before installing it for the first time.
"MENU > RECORD > Storage > HDD format"

1-3. Menu Bar

The menu bar will appear on the bottom of the screen as shown below.

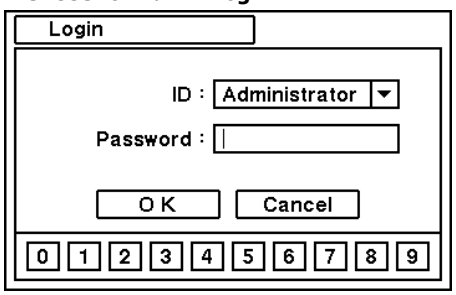
MENU	Pressing the Menu will bring up the main menu list.
0%	Shows the % of HDD being used.
	Turns on when the HDD is set to be overwritten.
	Sequence display mode.
	Turns on when the system is connected to the network.
	Turns on when the Alarm is being activated.
	Mirroring mode.
	E.REC (Emergency Recording) Mode.
2009-04-03 07:31:32 PM	Displays date & time.

	IR Remote Controller

1-4. Display Icons

	No Recording
	Recording (Red)
	E.REC (Emergency Recording)
	Event Recording (Red)
	Pre Event Recording (Blue)
	Motion Detection
	Sensor Detection
	Text In
	PTZ Camera
	Instant Backup
	Clip Maker (Blue)
	Backup (Red)
	Video Loss

1-5. User or Admin Login



Press MENU to enter main menu screen. The Login screen appears where you enter ID (Administrator or User) and Password. Password can be set up to 8 numbers by the combination of numbers from 0 to 9. The factory default password is 'none' so press OK to log in to the system for a first time log in. Password can be set under password set up option (MENU > SYSTEM > User). System will be automatically log out if it is not in-use for sometime. This "Auto Logout Time" can be set under password set up option (MENU > SYSTEM > User).

1-6. The Main Menu

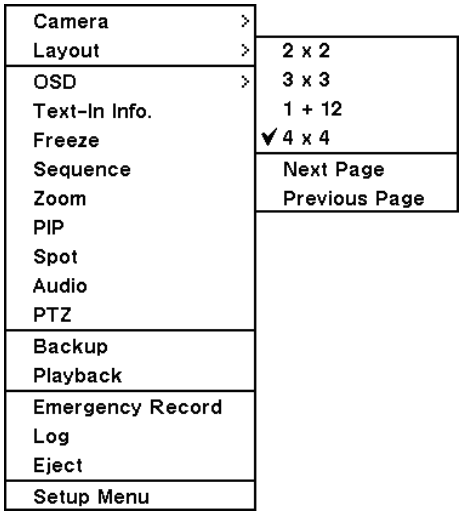
The Main Menu of the DVR consists of SYSTEM, DEVICE, DISPLAY, RECORD, NETWORK and EVENT. Each menu consists of various sub menus

that allow a detailed set up of the system. Use Mouse, Remote Controller or Front Buttons to access to each menu.

Note: Please make sure the system log out finishes when the system setting or operation is completed to prevent any unauthorized changes to the system settings or operations.

MAIN MENU	SYSTEM	Information
		Date & Time
		User
		Quick Setup
		System Log
	DEVICE	Camera
		Audio
		Alarm
		Keyboard
		RS232 & RS485
	DISPLAY	Display
		Monitoring
	RECORD	Storage
		Record
		Record Tools
	NETWORK	Address
		DDNS
		Notification
		Transmission
	EVENT	Sensor
		Motion
		Video Loss
		Text-In
		System
	LOGOUT	
	SHUTDOWN	

1-7. Contextual Menu



Additional Contextual Menu screen appears by right clicking on the Mouse. Layout options allow you to change the Camera on the monitor. Select preferred camera display option on the monitor.

Camera : Select camera on
Layout : Select display mode
OSD : Select OSD display option
Text : On/Off Text-In OSD.
Freeze : Pause current image display
Sequence : Begin sequence display
Zoom : Zoom in image X2
PIP : Select PIP mode and camera
Spot : Select each spot monitors' display
Audio : Select Audio outs
PTZ : Select PTZ options
Backup : Select backup options
Playback : Playback recorded data
E. Record : Start Emergency Recording
Log : Select System/Event log
Eject : Eject installed ODD
Setup Menu: Enter Main setup menu

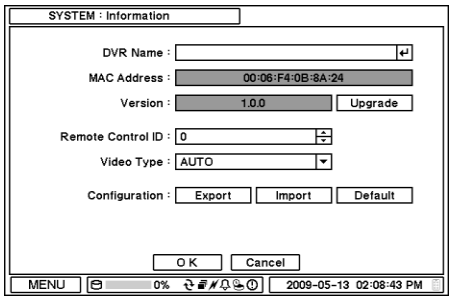
For more information on Contextual Menu please refer to number 2: DVR Configuration.

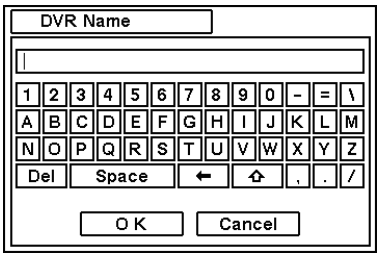
2. DVR Configuration

2-1. SYSTEM

Under SYSTEM menu, System configuration options for general Information, Date &Time, User, Quick Setup and System Log can be selected.

2-1-1.MENU>SYSTEM>Information





In the Information screen, DVR Name, System Version, Upgrade, Mac Address and Configuration options can be selected. Highlight and press DVR Name ↵ to enter or change DVR name. Name the DVR by using the virtual keyboard.

To upgrade the system, save the upgrade file to USB Flash Memory and connect it to DVR. Once the Device is connected, press Upgrade button to execute system upgrade.
Upgrade will take approximately 5 minutes. DVR will reboot automatically when the upgrade is completed.

Note: DO NOT remove USB Flash Memory or turn off the system during the upgrade. Removing USB Flash Memory or Turning off the system during the upgrade may cause system malfunctioning.

Remote Control ID

Enter Remote Control ID to control multiple DVRs individually. If Remote Control ID remains as 0, Remote ID does not have to be selected when using remote controller. It will work as general ID for any remote controls and a remote control will communicate with any DVR with ID 0.

Video Type

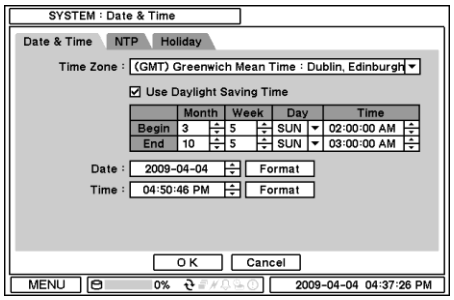
The system automatically detects camera signal types as NTSC/PAL, but the system also offers manual selection options for different signal types.

Configuration

System settings can be saved and loaded using Configuration option
Export: Save settings to USB Flash Memory
Import: Load saved settings from USB Flash Memory
Default: Load factory default settings

Note: Configuration Import does not affect or change your system and network settings.
Network settings will also not be changed when selecting Default option.

2-1-2. MENU > SYSTEM > Date & Time

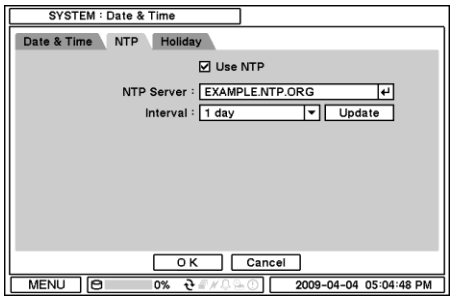


In the Date & Time, Time Zone, Date, Time, NTP Server, Holiday options can be selected.

Highlight and press Time Zone ▼ to select right Time Zone.

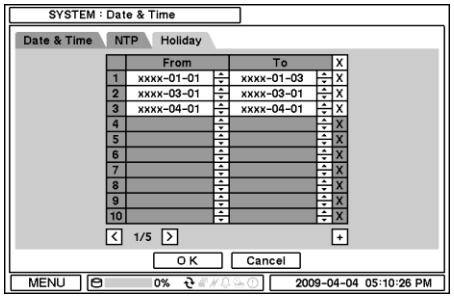
Select 'Use Daylight Saving Time' if it is applicable. Enter start and end date/time for local 'Daylight Saving Time'.

Press ▲▼ button to set up Date and Time. Press Format button to select a date & time display format.



Select 'Use NTP' to enter Time Servers to be synchronized with DVR. Highlight and press ↵ to enter Time Server using the virtual keyboard. Press 'Update' to synchronize the DVR time with the registered time server.

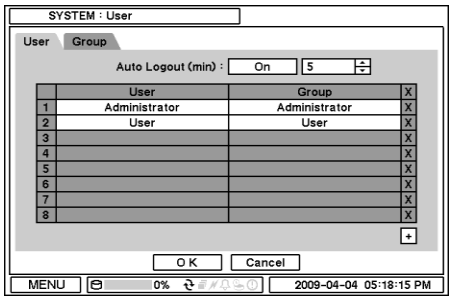
Note: NTP is not essential for DVR operation. Any type of Standard Time Server can be used (e.g. time.windows.com). Time Synch might not be completed due to heavy traffic or delays from the Time Synch server.

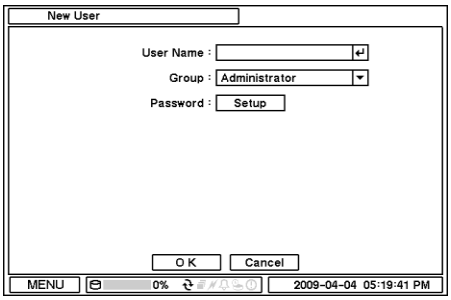


Press Holiday to set specific dates for Holiday setup. Set specific date by pressing + button. Change and delete dates using ▲▼ and X buttons.

Note: Some Holidays fall on different days. Therefore, they have to be updated every year.

2-1-3. MENU > SYSTEM > User

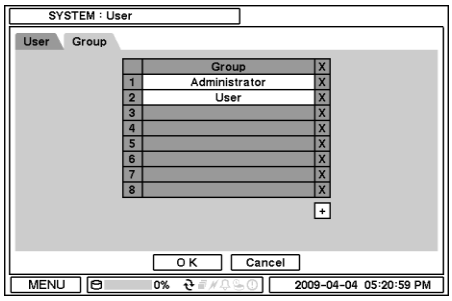




Press User Tab to enter/add a new user.

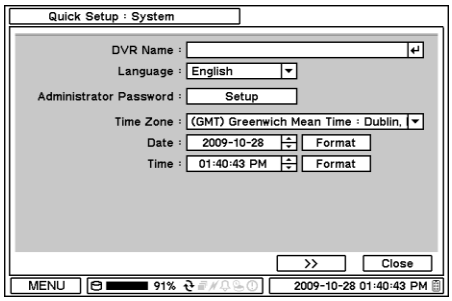
Auto Logout: Turn On or Off Auto Logout option.
Press + to add a new user. To remove an existing user, press X next to it.
User Name: Enter a user name
Group: Select a Group which a new user will belong to
Password: Set a new password or change a password.

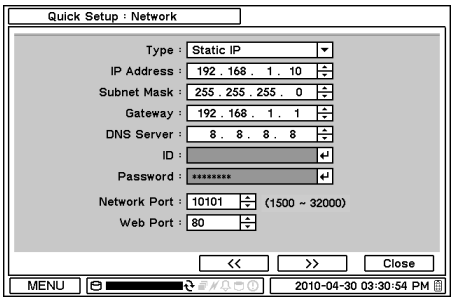
Note: You DO NOT have to enter the current password when setting a password for the first time, as there is no default password for Administrator/User.

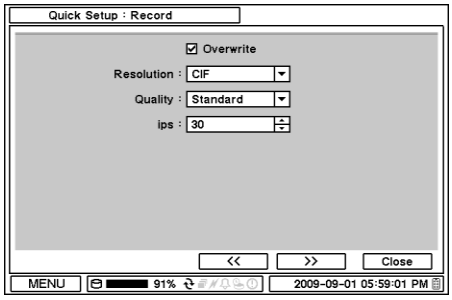


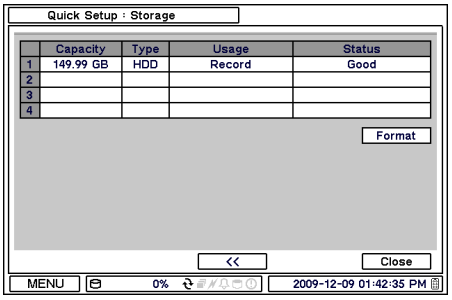
Set user registration and access rights for the system. Press Group tab to add and set up a group.
Press [+] to add a new group. Enter a group name and select access rights for a group. To remove an existing Group, press [X] next to it.

2-1-4. MENU > SYSTEM > Quick Setup



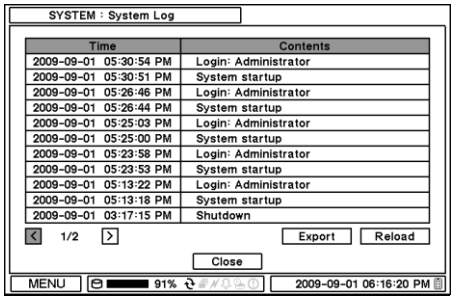






Quick Setup Menu allows easy and basic setup for main menu settings.

2-1-5. MENU > SYSTEM > System Log



In the System Log tab, full lists of system logs can be searched.

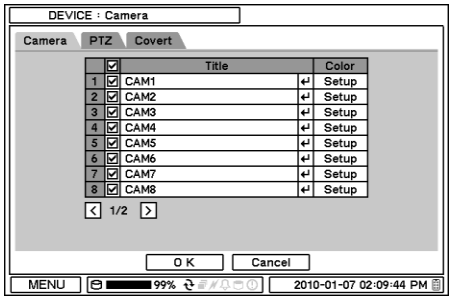
Press [Reload] button to refresh log list. USE [<] [>] button to search log list page by page.

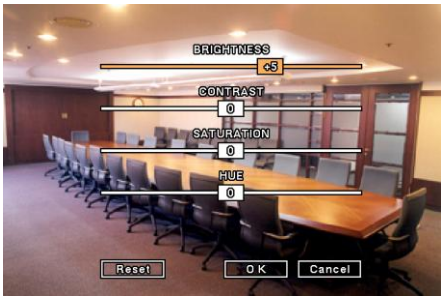
Log list can be exported in txt format.

2-2. DEVICE

Under Device menu, Device configuration options for Camera, Audio, Alarm, Keyboard and RS232 & RS485 (POS/PTZ) can be selected.

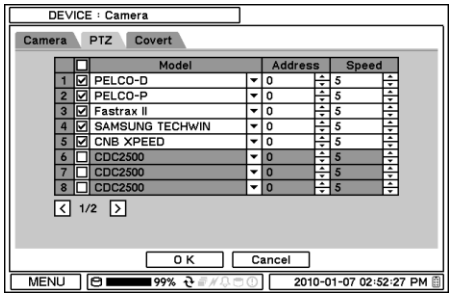
2-2-1. MENU > DEVICE > Camera





Set Camera display option. Camera display (video loss display) can be disabled by unmarking the box next to it if there is no camera connected. Press ↵ to change Camera title.

Press Setup button under Color to adjust video color. Click or drag a control box to adjust each color level.



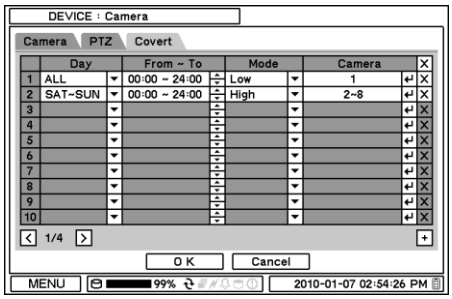
PTZ Control

Select the channel connected to the PTZ camera. Select PTZ menu by right clicking on the mouse.

Note: PTZ can only be controlled in single screen mode.

Use icons on the screen to control PTZ. By using a mouse, click arrows to move around PTZ and click icons for each functions of PTZ camera.

	Zoom Out
	Zoom In
	Focus on near distance
	Focus on far distance
	Save Presets
	Load Presets



Covert Setting

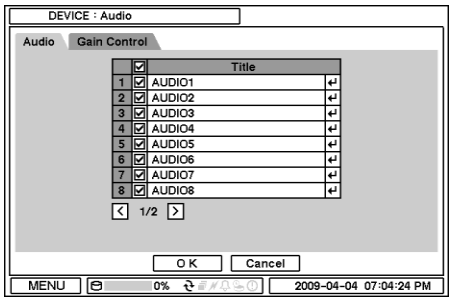
If Covert is set, live image will not be displayed. Covert can be scheduled by day, time and mode per camera.

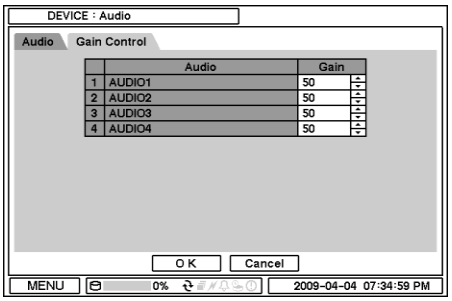
Covert Low Mode: No video image will be displayed on the screen but OSD will still remain there.

Covert High Mode: Neither video image nor OSD will be displayed on the screen.

Note: Any Covert option will not affect recording data as it only changes monitoring conditions.

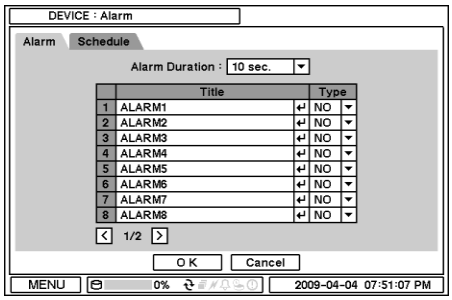
2-2-2. MENU > DEVICE > Audio

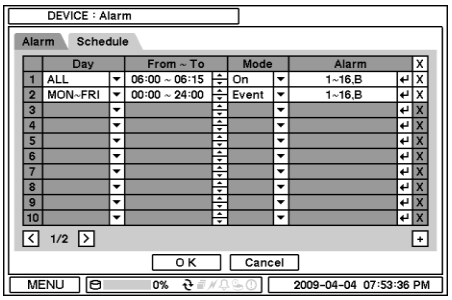




Select Audio for Audio recording. Gain Control Menu is available for Mic-In inputs only. Control Gain value using ⇳ button.

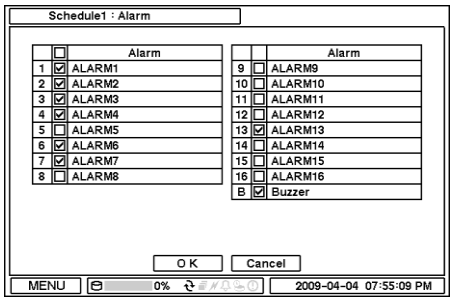
2-2-3. MENU > DEVICE > Alarm





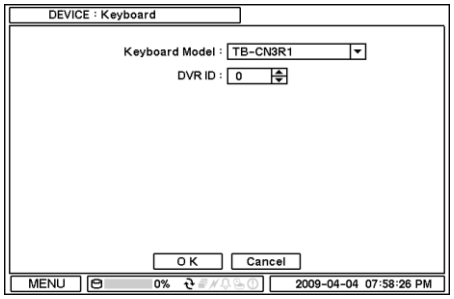
Alarm duration: Set Alarm activation time from 5 seconds to 10 minutes.

Select Schedule tap to schedule Alarm operation. Alarm can be set by day, time, mode and inputs (camera).



Press ↵ to choose Alarms and set Buzzer with Alarm activation.

2-2-4. MENU > DEVICE > Keyboard



Press ▼ to find and select keyboard from the list.

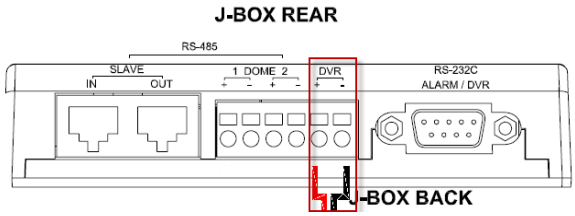
2-2-4a. VT-KBD1 Button Functions

MENU (DVR menu button)	Menu on DVR
LEFT	Left on DVR
RIGHT	Right on DVR
UP	Up on DVR
DOWN	Down on DVR
ENTER	Enter on DVR
FF	Fast Forward during playback
REW	Rewind during playback
PLAY/PAUSE	Pause during Playback
PLAY	Start Playback in Playback Mode
STOP	Stop Playback
DISPLAY	Display on DVR
PAUSE	Pause during Playback
PANIC	Panic on DVR
SHUTTLE	Shuttle on DVR
JOG	Jog on DVR
NUMBER (1-16) + DISPLAY	Change to desired channel

2-2-4b. How to Connect a Chrono DVR with a VT-KBD1 Keyboard

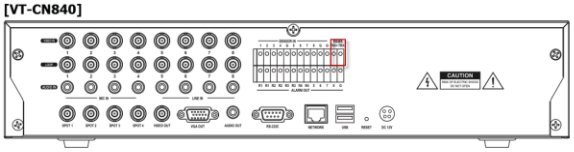
Use the following steps to connect a J-Box (VT-KBD1) to a Chrono DVR using RS-485

1. Connect a +/- cable under the DVR to the back of the J-Box

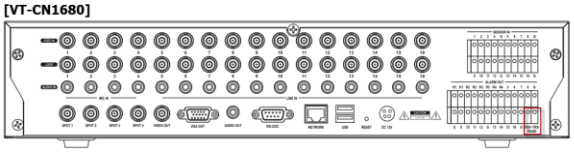


2. Connect the +/- cable to the RS-485 slots on the back of the DVR

[VT-CN840]



[VT-CN1680]



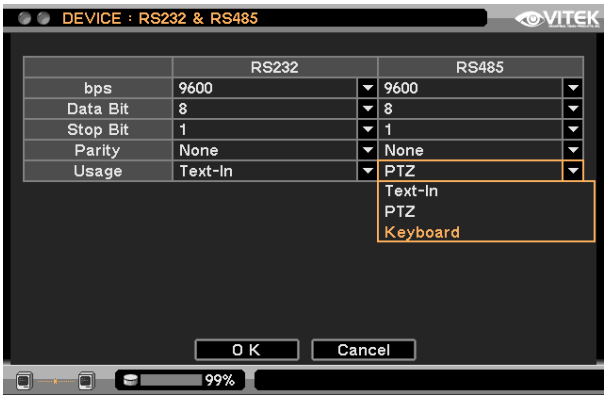
2-2-4c. Programming a Chrono DVR to operate with a VT-KBD1 Keyboard

1. Press the "MENU/ENTER" key on the front panel of the Chrono DVR

2. Select **DEVICE** under "Setup Menu" and press ENTER

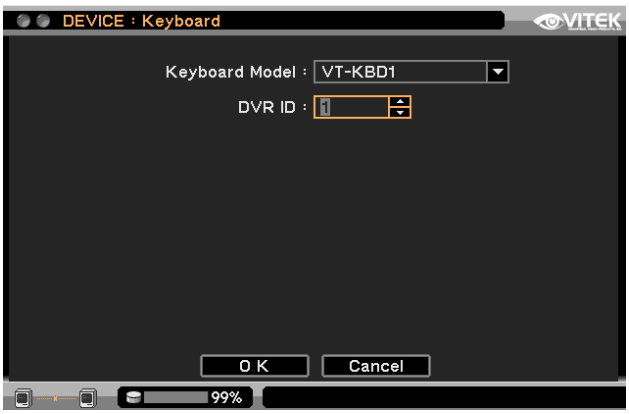
3. Select **RS232 &RS485** under "DEVICE" and press ENTER

4. Under "DEVICE: RS232 & RS485," select **"Keyboard"** from the dropdown menu and press **"OK"** at the bottom



5. Under "DEVICE" select **"Keyboard"** and press Enter

6. Under "DEVICE: Keyboard," select **VT-KBD1** from the dropdown list next to "Keyboard Model" and press OK. Next, set the DVR ID number to the number of your preference and press OK



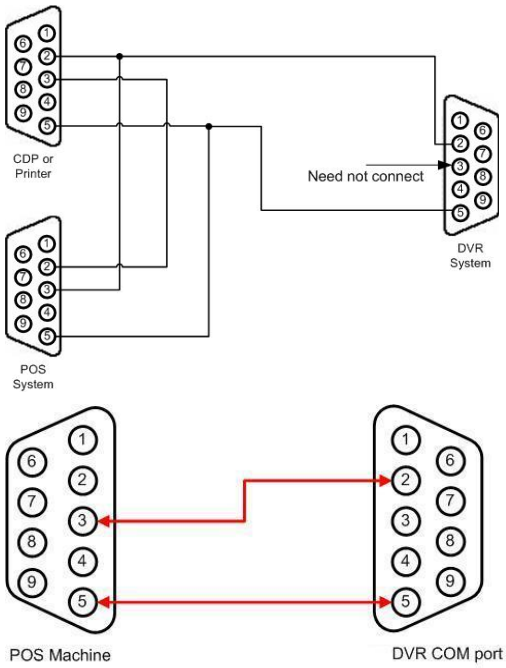
7. To save the setting and exit, select **TOP MENU**

8. Under "Setup Menu," select **EXIT** and press ENTER

2-2-4d. How to use the POS Device

Prepare the RS232 Cable to connect the POS machine to the DVR

Match the db9 connections to the picture:

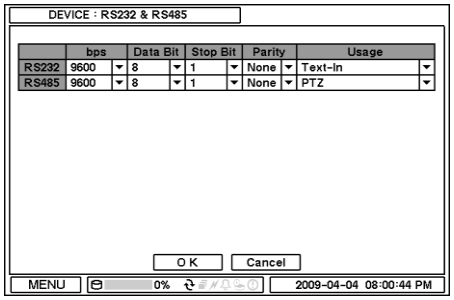


1. The cable splits into a Y type format when you need to connect to the printer and/or CDP at the same time.

2. A direct connection configuration between the DVR and the POS Machine. Pin #2 (RX), Pin #3 (TX), Pin #5 (Ground)

Make sure the Baud Rate, Date Bit, Parity Bit, and the Stop Bit all have the same value (DVR, POS Machine)
Ex: DVR and POS both have to be set with the same value; 9600, 8, N, 1 and Date is ASCII Code. This depends on your POS Machine.

2-2-5. MENU > DEVICE > RS232 & RS485



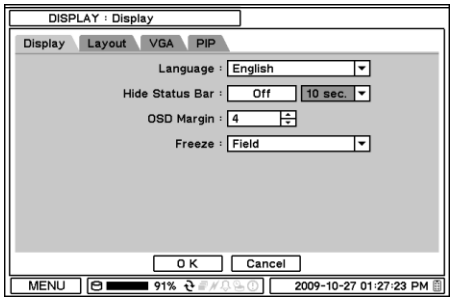
Press ▼ to select a device for each port.
RS232: Supports Text In (POS) device, PTZ and Keyboard.
RS485: Supports Text In (POS) device, PTZ and Keyboard.

Note: Text In devices (e.g. Cash Register) need to use ASCI code for Text In info on DVR

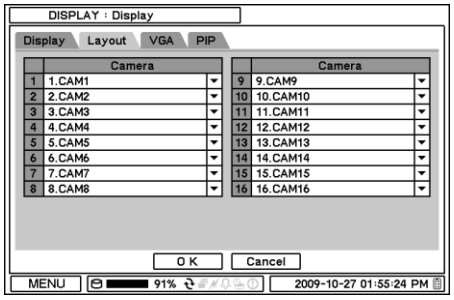
2-3. DISPLAY

Under Display menu, Display configuration options for OSD and Monitor can be selected.

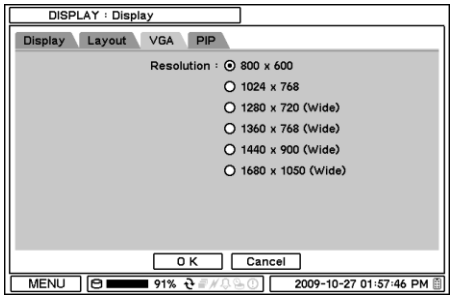
2-3-1. MENU > DISPLAY > Display



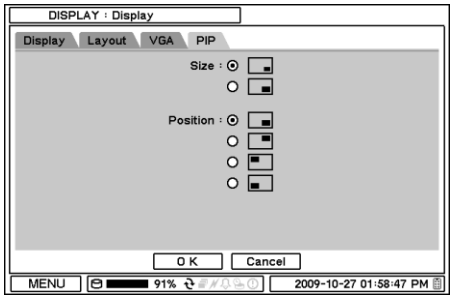
Language: Select system language. Press ▼ to find available language options.
Hide Status Bar: Select On/Off and time to hide Status Bar when system is not in use.
OSD margin: Set OSD margin (position) using ▲▼.
Freeze: Display an image in either Field or Frame format when it is in still (freeze) mode.



Layout: Allows you to change or reallocate video inputs' (cameras) displays.

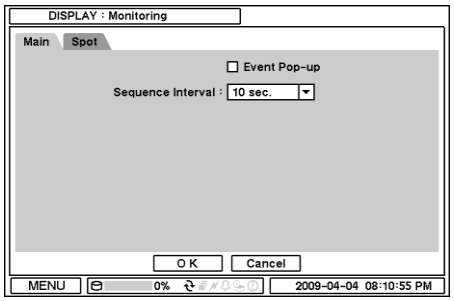


Various resolution options are available for different types of monitors. Please select monitor resolution under **VGA** tap menu.

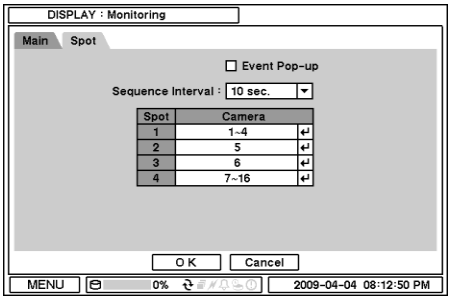


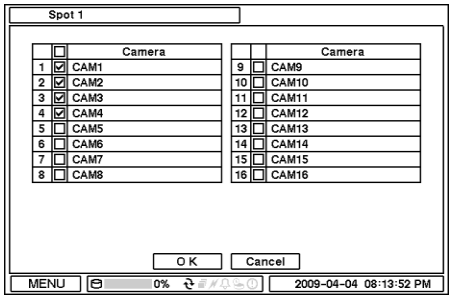
PIP (Picture In Picture) size and its display positions can be selected under the PIP menu. Please select desired size and positions of PIP display.

2-3-2. MENU > DISPLAY > Monitoring



Event Pop-up: Pops up the camera image in full screen when pre-set event occurs.
Sequence Interval: Set time interval between cameras under sequence mode.



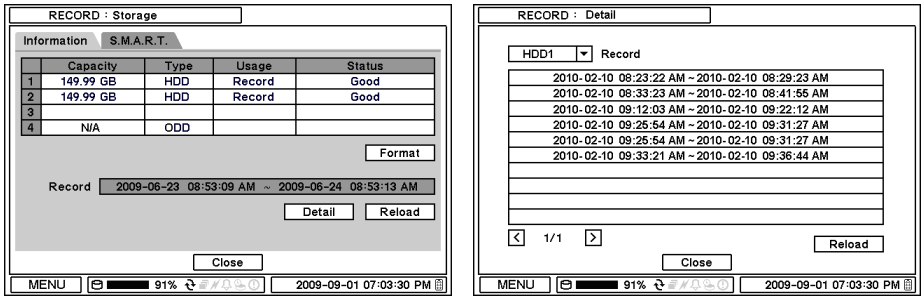


Event Pop-up: Pop up the camera image in full screen on spot monitors when pre-set event occurs.
Sequence Interval: Set time interval between cameras on spot monitors for sequencing.
Select camera display option on spot monitors. Spot outs support full and sequential camera displays. Press ↵ button to set single or multi cameras for sequential display on spot monitors.

2-4. RECORD

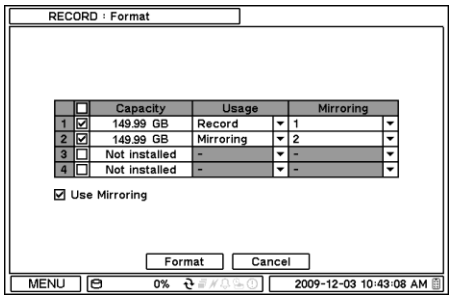
Under Record menu, Record configuration options for Storage, Record, and Record Tools can be selected.

2-4-1. MENU > RECORD > Storage



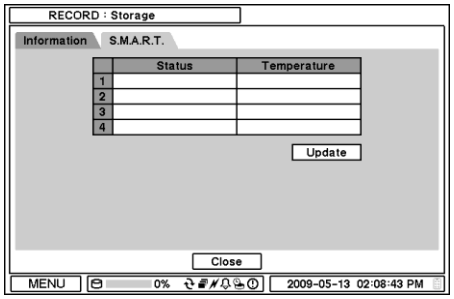
In Storage, it displays the installed/connected storage status such as Capacity, Type, Usage and Status.

Format: Press Format to format selected HDD.
Record: Displays the recording period and data stored on HDD.
Detail: Displays the detail information of data stored on HDD



Use Mirroring: Mirroring allows data to record on two HDDs simultaneously. This will prevent unexpected loss of recorded data due to HDD or system failure. 2 or 4 HDDs are required for Mirroring function. The size of the Mirror HDD needs to be the same or bigger than the recording HDD. Select Use Mirroring option and choose a recording HDD and Mirroring HDD. Once all the options are set, click Format to start Mirroring.

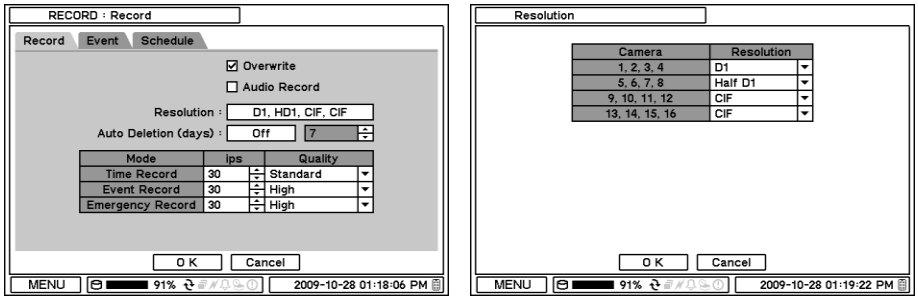
Note: Any changes or mis-installation of HDDs will stop mirroring and turn the system into recording only mode.



In S.M.A.R.T, HDD statuses are displayed as well as its temeprature. Click Update to get the latest status.

Mirroring allows recording of data on two HDDs simultaneously. This will prevent unexpected loss of recording data due to HDD or system failure.

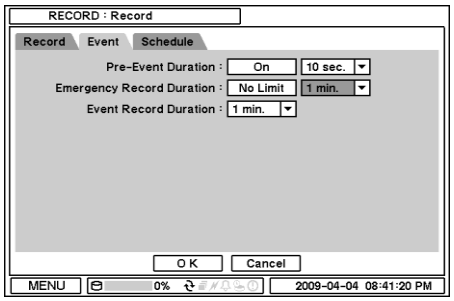
2-4-2. MENU > RECORD > Record



In Record, general recording options can be selected including overwrite, resolution, speed, recording quality and etc.

Overwrite: Select Overwrite to overwrite recorded HDD data when it is full
Audio Record: Select Audio Record to record audio with video image
Resolution: Select recording resolution. The setting can be done with groups of 4 cameras (1-4, 5-8, 9-12 and 13-16)

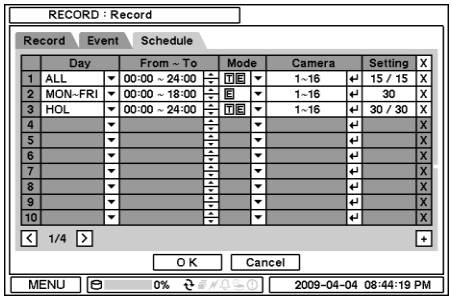
Auto Deletion (days): Turn on Auto Deletion to automatically delete any data older than the defined days
Time Record: Set ips/quality for continuous recording
Event Record: Set ips/quality for event recording
Emergency Record: Set ips/quality for emergency recording mode

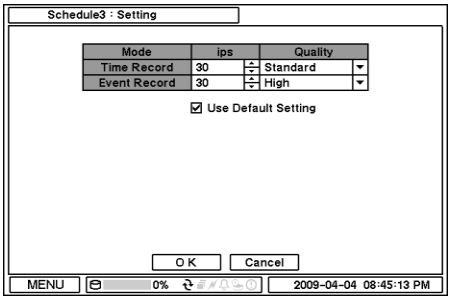


In Event, pre and post recording options for Event can be set.

Pre-Event Duration: Video Images that occurred right before an Event can be recorded by setting Pre-Event under Event Mode. The duration of Pre-Event recording can be set using Pre-Event (sec) up to 30 seconds.

Emergency Record Duration: Time duration can be set for Emergency recording from 5 seconds to 30 minutes or continuously by selecting No Limit option.
Event REC Duration: Set recording duration for events up to 30 minutes.

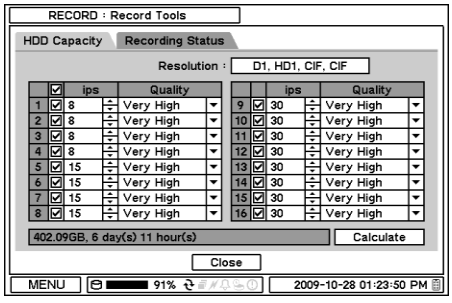


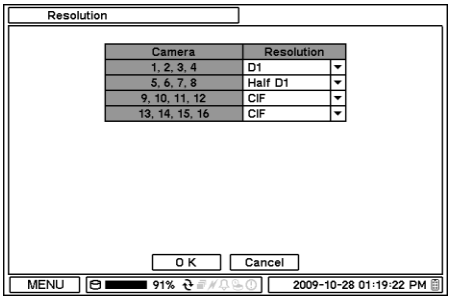


In Schedule, fully detailed and specified recording schedules can be set by day, time, modes, cameras and recording options.

Press [+] to add a new schedule. To remove an existing schedule, press [X]. Press Setting to set recording options.
Use Default Setting: Check Use Default Setting to follow main recording setting under Record menu.

2-4-3. MENU > RECORD > Record Tools





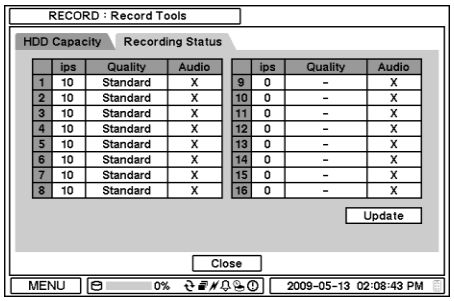
In Record Tools, estimated HDD usage and recording period can be calculated. Press Calculate once resolution, IPS, number of cameras and quality are set. The recording period is calculated based on the size of the HDD installed.
The GB size shows what HDD size is required for a day of recording. Day and Hours shows the period that can be recorded based on the installed HDD size.

Note: The calculation results show approximate data only. Same frame rate and video quality does not guarantee same storage size and

recording duration. This is due to the variety of conditions on images such as more/less colors or more/less movements. This situational variance will affect the file sizes more at lower frame rate settings.

Note: Changes IPS manually. It does not change IPS according to the change of resolution.

Note: approximate size for each resolution – CIF: 360X240, Half D1: 720x240, D1: 720x480

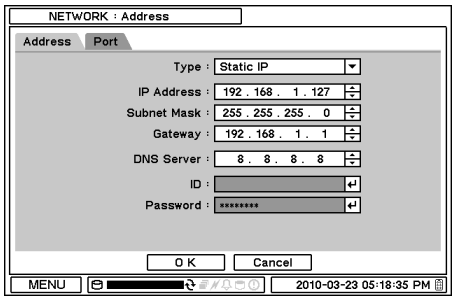


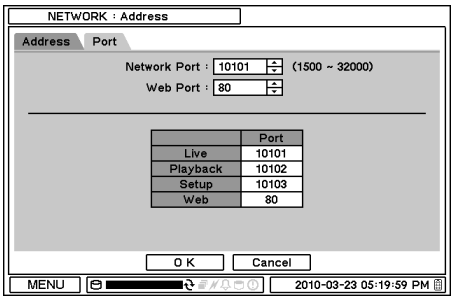
In Recording Status, current recording options and status are displayed.

2-5. NETWORK

Under Network menu, Network configuration options for network Address, DDNS, Remote Notification and Transmission can be set up.

2-5-1. MENU > NETWORK > Address





In Address, Information such as Type, IP address, Subnet Mask, Gateway Port and DNS can be set for network connections.

Type: Select the type of network configuration from: Static IP, DHCP and ADSL (with PPPoE).

IP Address: Enter IP address using button.

Subnet Mask: Enter Subnet Mask using button.

Gateway: Enter Gateway using button.

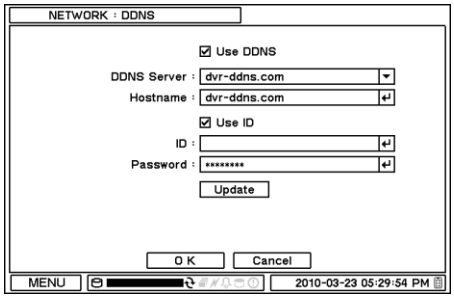
DNS: Set up the IP address of the DNS server. If you set up the DNS Server, the domain name of the DVRNS server instead of the IP address can be used during the DVRNS Server setup.

In Port, Select appropriate port number for external access to the system.
The port list shows necessary ports to be opened for each operation.

Note: ID and Password are required in ADSL (with PPPoE) type.

Note: Default TCP port is 10101 but it can be set from 1500 to 32000 if necessary.

2-5-2. MENU > NETWORK > DDNS



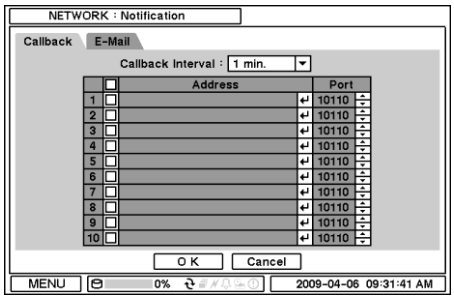
In the DDNS, network options for DDNS can be selected.
DDNS: Dynamic Domain Name Server allows dynamic network connections.

Note: "dvr-ddns.com" and "www.dyndns.org" offer free registrations for DDNS service. Please refer to the appendix for DDNS set up page.

Host Name: Name the DVR or site where it is located using the virtual keyboard by pressing ↵.
ID/Password: ID and Password are required for Authentication.

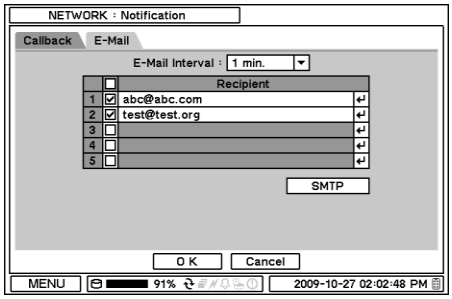
Note: Use ID/Password registered in DDNS.

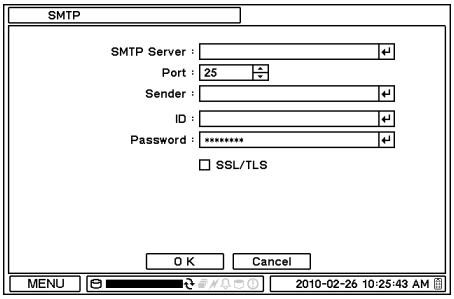
2-5-3. MENU > NETWORK > Notification



In Callback, set up the IP addresses of client sites so that Events detected in the local system can simultaneously notify multiple client sites. Enter IP addresses of client sites to receive event notifications on remote sites. Press ↵ to pop up the virtual keyboard.

Callback Interval: Select Callback Interval to set time interval between consequential events being sent to remote site.
Note: Any events that occur between the pre-set interval times will not be sent to a remote site. E.g. If the interval is set as 30 seconds, only the events that occur every 30 seconds, since the first event, will be sent to a remote site.



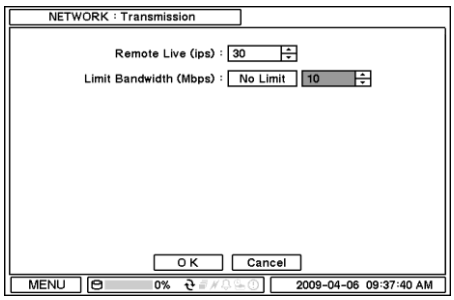


In Email, Events can notify an individual's email address by text message.
E-Mail Interval: Select E-Mail Interval to set the time interval between consequential events being sent to remote site via email.
Recipient: Enter the email address of a recipient. Up to 5 recipients can be entered.

Note: Any events that occur between the pre-set interval time will not be sent to remote site. E.g. If the interval is set as 30 seconds, only the events that occur every 30 seconds since the first event will be sent to a remote site via email.

SMTP Server: Enter SMTP server using the virtual keyboard. SMTP server information can be obtained from a system administrator.
Sender: Enter the address/name where the email is being sent from.
SSL/TLS: Check SSL/TLS to send an email via an SMTP server requiring SSL authentication.

2-5-4. MENU > NETWORK > Transmission



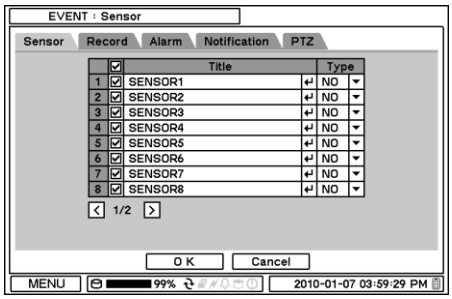
In Transmission, Network transmission can be controlled with IPS and bandwidth.

Note: Max. IPS on Network transmission is 120ips@16ch-DVR and 60ips@8ch-DVR.(NTSC)

2-6. EVENT

Under Event menu, events can be set in synchronization with Sensor, Motion, Video Loss, Text-In, System.

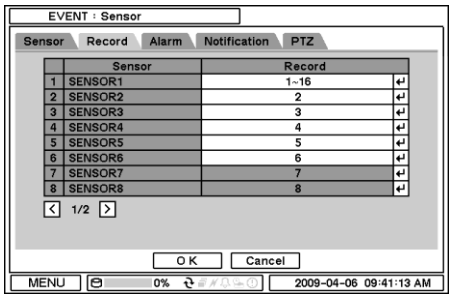
2-6-1. MENU > EVENT > Sensor

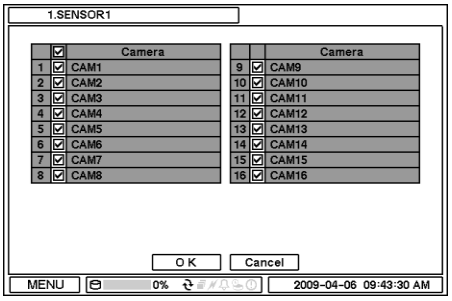


In Sensor, each sensor can be selected for activation and its type. Select Sensor Type using ▼ button.

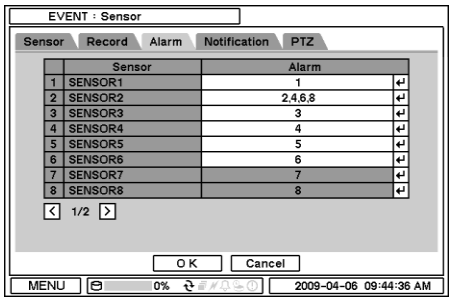
NC: Normally Closed

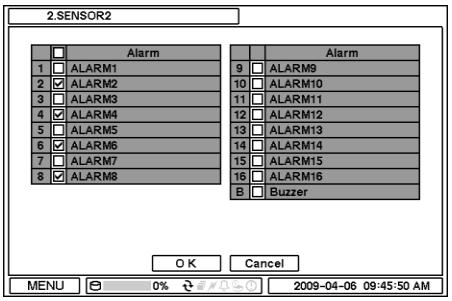
NO: Normally Opened



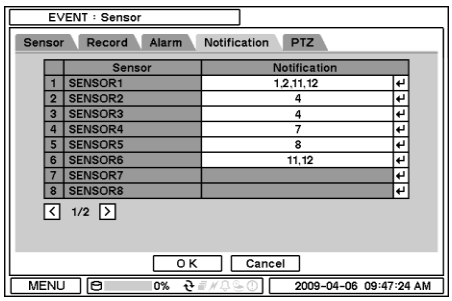


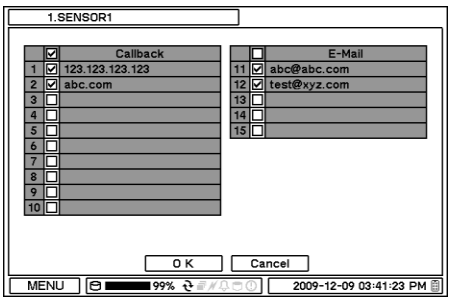
In Record, each sensor can be synchronized with a single or multiple cameras. Press ↵ to select cameras to be synchronized with sensors.



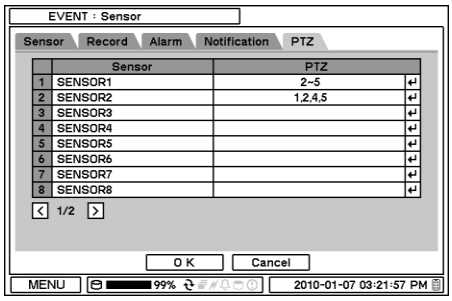


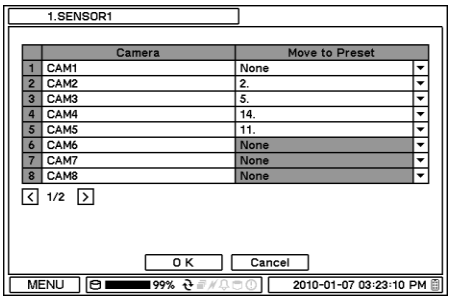
In Alarm, each sensor can be synchronized with a single or multiple alarms. Press ↵ to select alarms to be synchronized with sensors.





In Notification, each sensor can be synchronized with a single or multiple callback or emailing sites. Press ↵ to enter callback or email address to be synchronized with sensors.

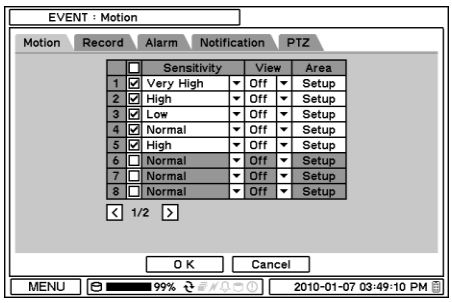


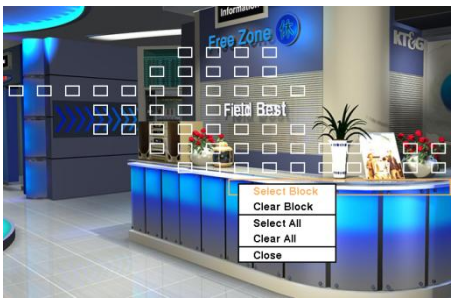


PTZ can be synced with Event using its preset function. If an event occurs, PTZ moves to the position where event and position are pre set. The above menu shows, Sensor 1 is set to sync to cameras 2, 3, 4 and 5. If you click the PTZ section, PTZ preset (position) can be set for cameras in the event of Sensor activation.

PTZ event related preset can only be synched with Sensor/Motion/Video Loss events. If multiple events occur to a camera at once, it takes events in order of Sensor > Motion > Video Loss.

2-6-2. MENU > EVENT > Motion



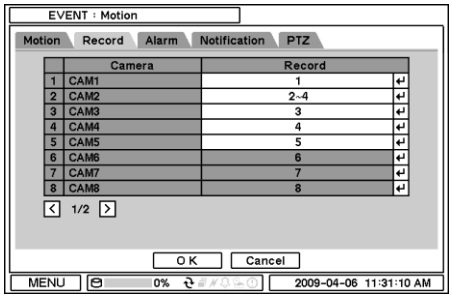


In Motion, system provides Motion Detection function. Set Motion Detection using Sensitivity, View and Area options.

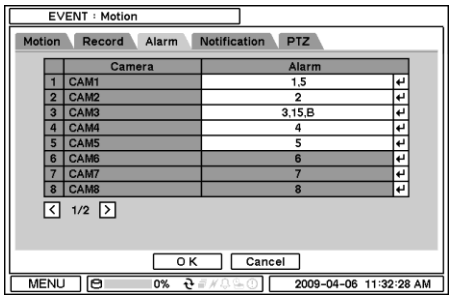
Sensitivity: Select motion sensitivity from Very Low to Very High.
View: Turn on or off the motion zones on the screen when motion is detected.
Area: Define the area for motion detection.

Press Setup under Area to define motion detection areas. The blocks indicate the defined areas for motion detection.

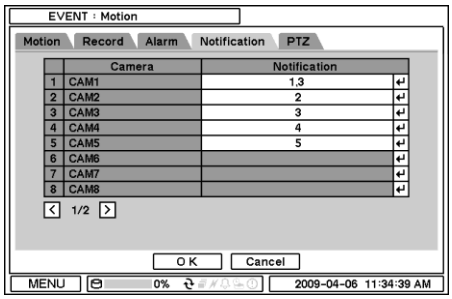
Select Block: Use arrow keys to move around a box. Select individual blocks to set motion zones. Use number keys to select and unselect blocks. (When using a mouse, left click)
Clear Block: Unselect all blocks inside a box
Select All: Select blocks on entire screen
Clear All: Unselect blocks on entire screen



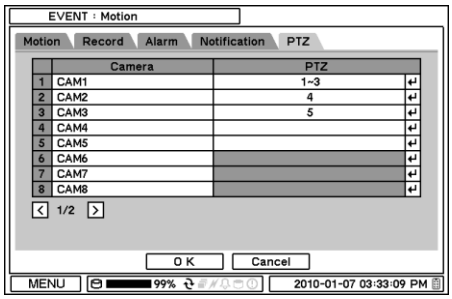
In Record, each camera can be synchronized with a single or multiple motion detections from other cameras. Press ↵ to select cameras to be synchronized with motion detections.



In Alarm, each camera with motion can be synchronized with a single or multiple alarms. Press ↵ to select the alarms to be synchronized with the cameras for motion events.

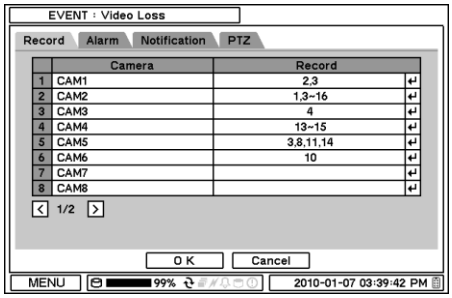


In Notification, each camera with motion can be synchronized with a single or multiple callback or emailing sites. Press ↵ to enter callback or email addresses to be synchronized with cameras for motion events.

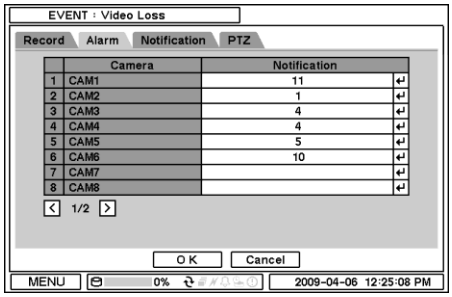


PTZ can be synced with Motion event using its preset function. If Motion is detected, PTZ moves to the position where event and positions are pre set.

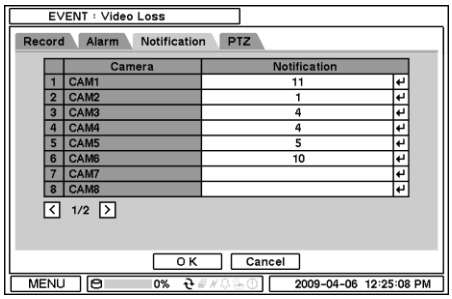
2-6-3. MENU > EVENT > Video Loss



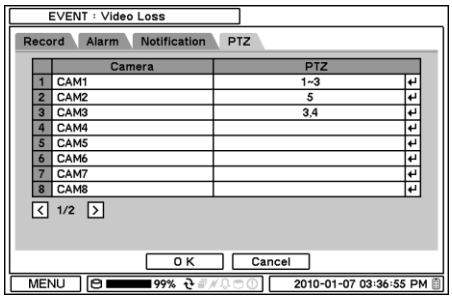
In Video Loss, single or multiple cameras can be synchronized to event recording when there is video loss. Press ↵ to select single or multiple cameras to be synchronized with cameras for video loss.



In Alarm, each camera with video loss can be synchronized with single and multiple alarms. Press ↵ to select alarms to be synchronized with cameras for video loss.

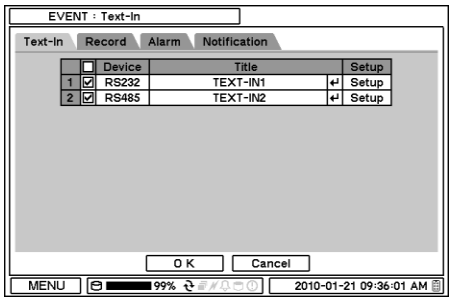


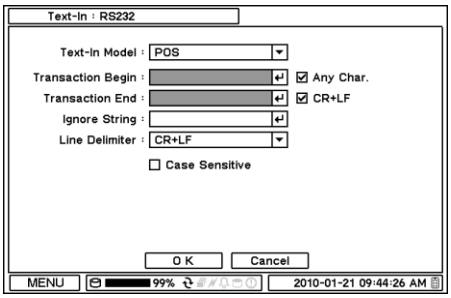
In Notification, each camera with video loss can be synchronized with single and multiple callback or emailing sites. Press ↵ to enter callback or email address to be synchronized with cameras for video loss.



PTZ can be synced with Video Loss event using its preset function. If Video Loss occurs, PTZ moves to the position where event and positions are pre set.

2-6-4. MENU > EVENT > Text-In

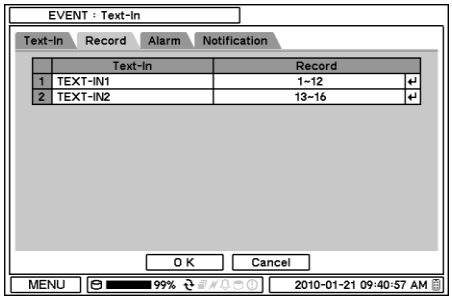


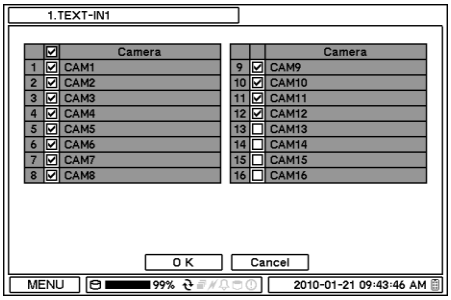


The system allows Text In from POS/ATM machines.

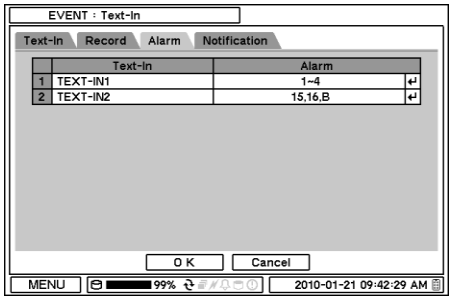
Note: For use of POS/ATM, the system must support general ASCI code.

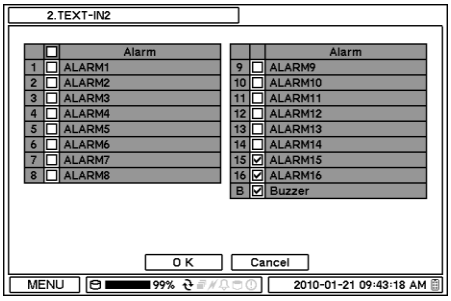
Text-In Model: Select Text-In model from the list.
Transaction Begin: Enter a word for the transaction info to be displayed on the screen as a start.
Any Character: Check Any Character to start display a text with any character as a start.
Transaction End: Enter a word of last line where the transaction info to be displayed on screen as the end. If you want additional lines to be displayed after the transaction end, select more line options.
Ignore String: Enter a word to ignore strings includes selected word.
Line Delimiter: Enter a symbol or a word to distinguish the end of lines.
Case Sensitive: Select Case Sensitive option if distinguish a word with case sensitivity.



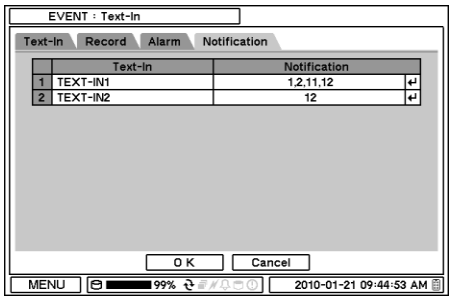


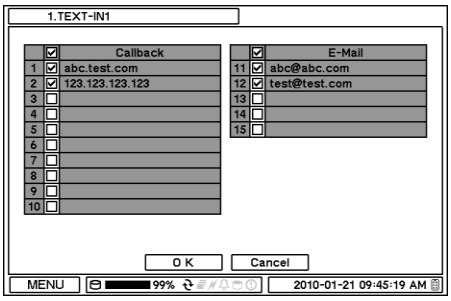
In Record, text event can be synchronized with single or multi camera record. Press ↵ to select camera(s) to be synchronized with text event. If RS232/RS485 Ports are being used at the same time, it has to be used for different cameras. For example, if RS232 is set for cameras 1~12, RS485 should be set with 13~16. They can't share the same group of cameras.





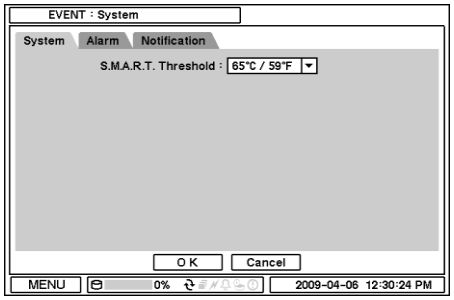
In Alarm, text event can be synchronized with a single or multiple alarms. Press ↵ to select alarms to be synchronized with text event. If B is selected, system will buzz for alarm detections.



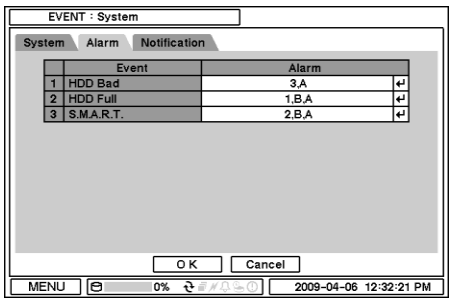


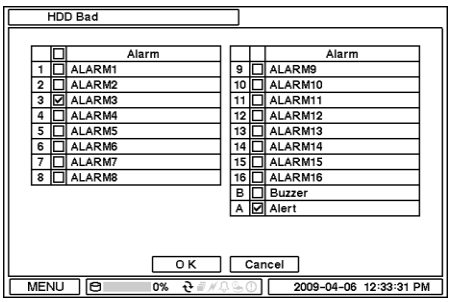
In Notification, text event can be synchronized with a single or multiple callback or emailing sites. Press ↵ to enter callback or email address to be synchronized with text event.

2-6-5. MENU > EVENT > System

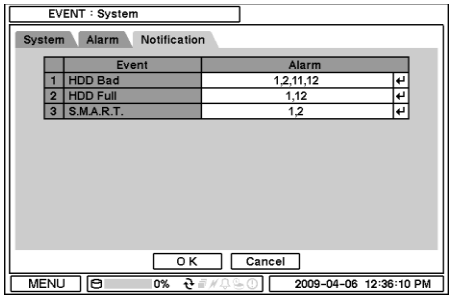


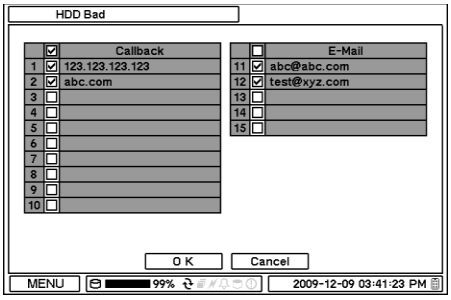
In System, the S.M.A.R.T function monitors storage conditions such as Temperature, Conditions and Recording. S.M.A.R.T Threshold allows you to preset a tolerable temperature level for storage. If HDD temperature increases over the preset temperature, it will notify a user in various ways.





In Alarm, each system event can be synchronized with a single or multiple alarms. Press ↵ to select the alarms to be synchronized with each event. If Alert is selected, a warning message will appear on the screen.

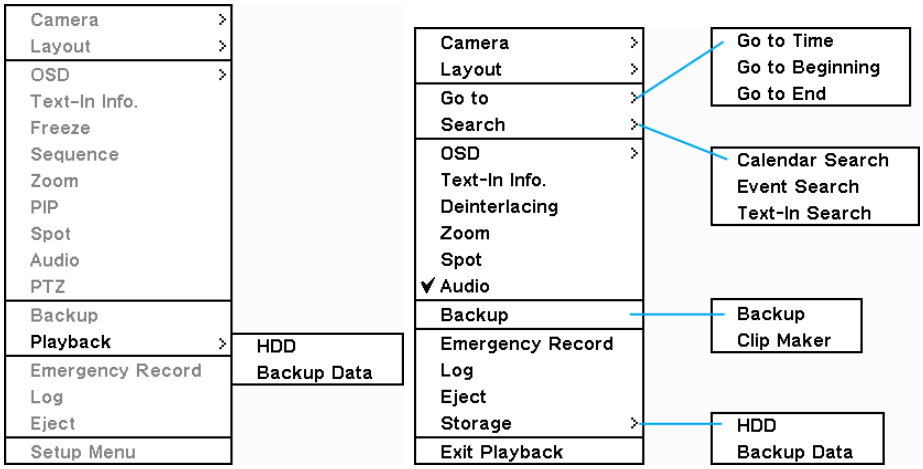




In Notification, each system event can be synchronized with a single or multiple callback or emailing sites. Press ↵ to enter a callback or email address to be synchronized with system events.

3. Playback

The system provides various playback menus to search for recorded data. Right click on Search Mode and select the storage type. If backup data is selected, the data on the external HDD can be searched.



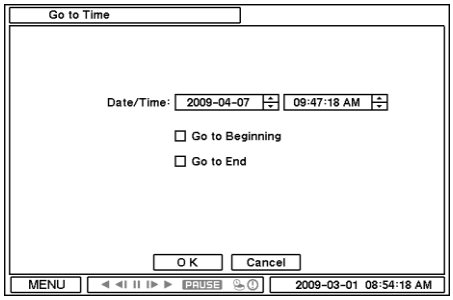
Camera : Select camera
Layout : Select display mode
Go to : Search recorded data by time/date
Search : Select Calendar Search, Event Search and Text In Search

OSD : Select OSD display option
Text-In Info. : Select Text display option for POS or ATM machines.
De-interlacing : De-Interlacing for D1 resolution
Zoom : Zoom in X2
Spot : Select each spot monitors' display
Audio : Select Audio outs

Backup : Select backup or Clip Copy option

E. Record : Start Emergency Recording
Log : Select System/Event log
Eject : Open installed ODD
Storage : Select playback storage option
Exit Playback : Exit Search Mode and return to Live Mode

3-1. Go to Time

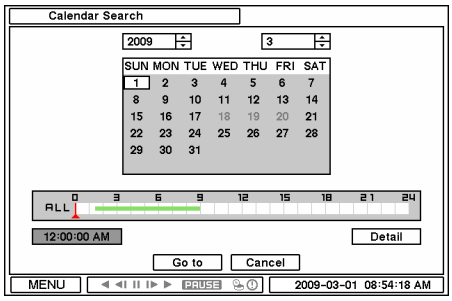


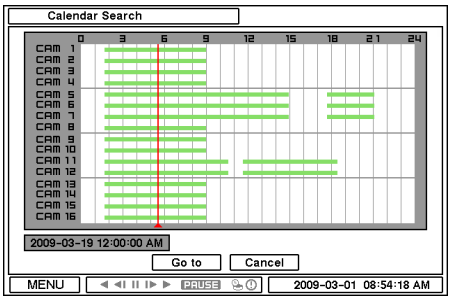
Select Go to Time to search recorded data by time/date. Set time/date using ⇕ button. Go to Beginning and Go to End options allow you to search the very first and last data recorded. Once desired settings are completed, press OK to begin playback.

Go to Beginning: Move to the very first recorded data

Go to End: Move to the latest recorded data

3-2. Calendar Search



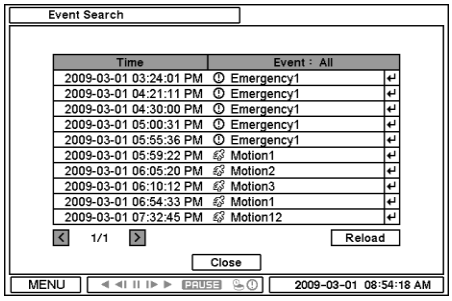


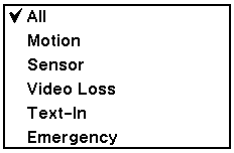
Calendar Search provides easy graphical searching by displaying numbers (dates). Dates with recorded data will be highlighted. Once you select the date, it will display the recorded time in a table.

The numbers on the top of the table show the time frame in 24hour time frame format, and titles on the left indicate camera numbers. The color bar shows the full information of recorded data on the selected date. Move the indicator (line) to select specific recorded time on the selected date. For a detailed display of recorded data please press Detail.

Once desired settings are completed, press 'Go To' to begin playback.

3-3. Event Search





Select the date and type of event to find specific data. Press Event: All sections on the top of the list will display event search options.

All: System displays every event

Motion: System displays every event related to Motion

Sensor: System displays every event related to Sensor

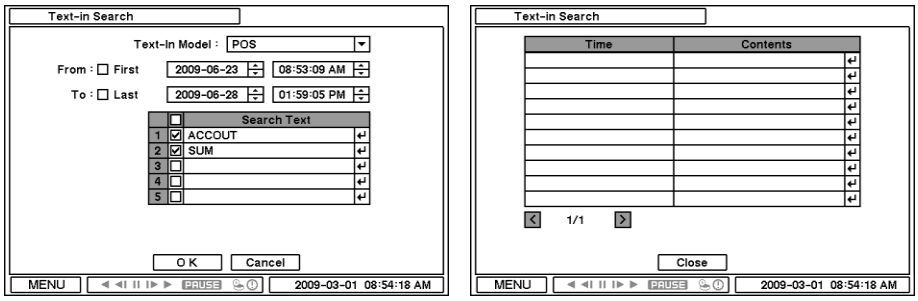
Video Loss: System displays every event related to Video Loss

Text-In: System displays every event related to Text In

Emergency: System displays every event related to Emergency Recording

Click the up and down button to highlight the log and playback the event data.

3-4. Text-In Search

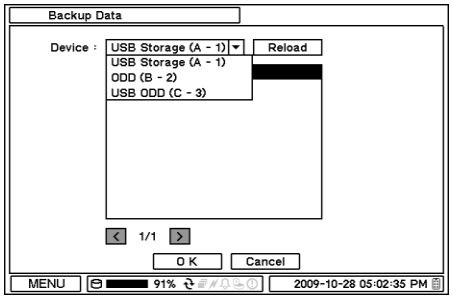


Search for Time and Transaction information. Press Search for detailed information.

Text In Model: Select a model type for Text In
From: Set beginning time to start search or select 'First' to search from the first data recorded
To: Set end time to end the search or select 'Last' to search to the last data recorded
Search Text: Enter any words to search text data

Once all the information is entered, press OK to start Text In search.

3-5. Backup Data Playback



Backup files on backup medias can be played on the DVR. Insert the media with the backup files and then select the file you want to playback.

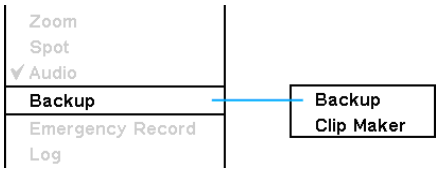
3-6. Playback Control

R.Play: Reverse Playback
Step Backward: Go to the previous image
Pause: Freeze or Stop current image
Step Forward: Go to the next image
Play: Play the data at normal speed

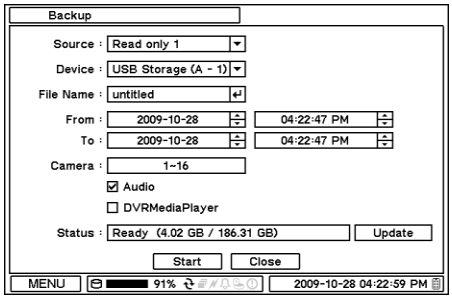
To control the backward and forward playback speed, press on ◂ or ▸ repeatedly. Playback speed can increase up to x32.

4. Backup

Recorded data can be backed up on a USB Flash memory stick. Select either the Backup or Clip Copy option during Search or Live mode.



4-1. Backup



In BACKUP, the recorded data can be selected to backup to a USB device.

Press USB Device to select the type of USB Device that is connected to the system.

Select the date & time period of the data to be backed up using the button.

Select the Camera number to be backed up or select 'All' to backup all the data recorded during the selected period. To back up recorded audio and video data, select Audio.

Status shows the capacity of the device being prepared for backup, and it will show the backup progress during backup.

The files saved (backup) in DVRMediaPlayer (.exe) format allow for multi camera backup and the files do not require any specific codec for playback on a PC. To open and play a file saved in DVRMediaPlayer (.exe), double click the file and it will automatically be played on the Internet Explorer window. This function is supported only on Internet Explorer 7.0 or above.

Note: The backup process may be slowed down if the system is being monitored

Note: "DO NOT remove the back up media while the data backup is being processed. It may cause critical damage to either the media or the system."

Note: During the CD or DVD back up, the ODD door may open and close. Please do not remove the CD or DVD during the back up process until it has completely finished.

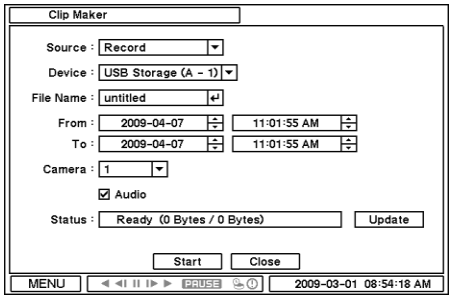
4-2. Instant Backup

Press the backup button to start Instant Backup during playback. The Instant Backup window will appear where you can select Device, File Name, and Audio. Press Start to continue the playback and backup. The Backup Icon will appear on the screen during the Instant Playback. Press the backup button one more time to stop and complete Instant Backup.

Note: "DO NOT remove the back up media while the data backup is being processed. It may cause critical damage to either the media or the system."

Note: Playback speed will be slower than usual while instant back up is processing.

4-3. Clip Maker



Clip Maker allows you to create a single channel backup file, which can be played on a PC. Select Clip Maker option on the pop up menu during the live or pause mode on the playback.

Select the backup option for Clip Maker. Press [Start] button to create Clip Maker. Use Quick Time player to play the file created using Clip Maker.

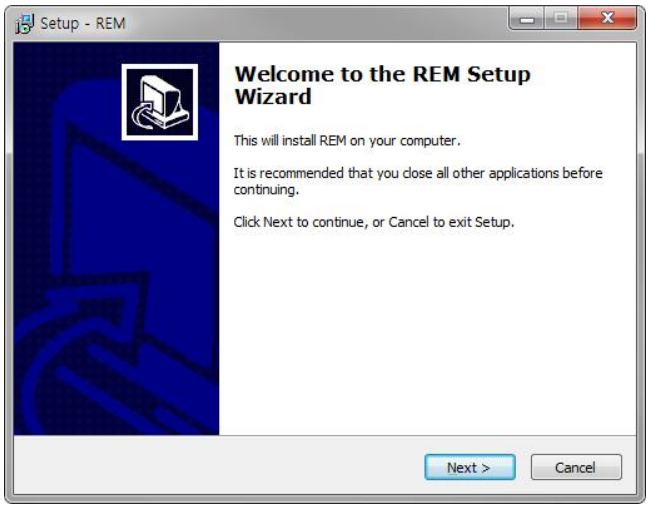
Note: The Clip Maker file can not be played on other programs such as Window Media Player.

Chapter 4. Remote Software

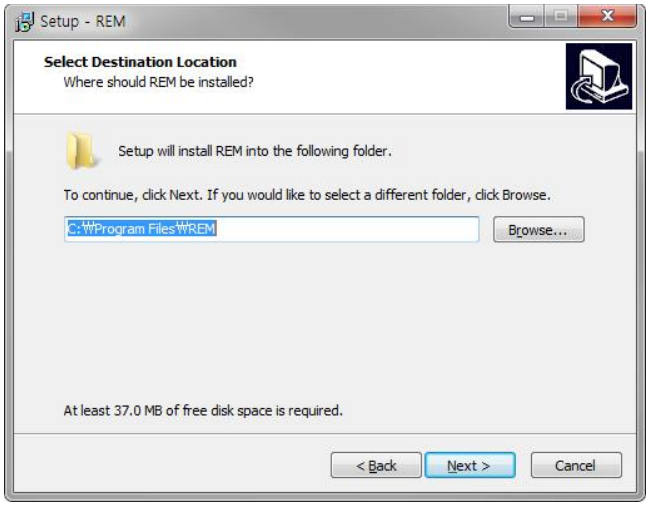
1. VITEK REM Software Installation

The Software CD contains 'Chrono Series DVR.' Insert the CD into the PC.

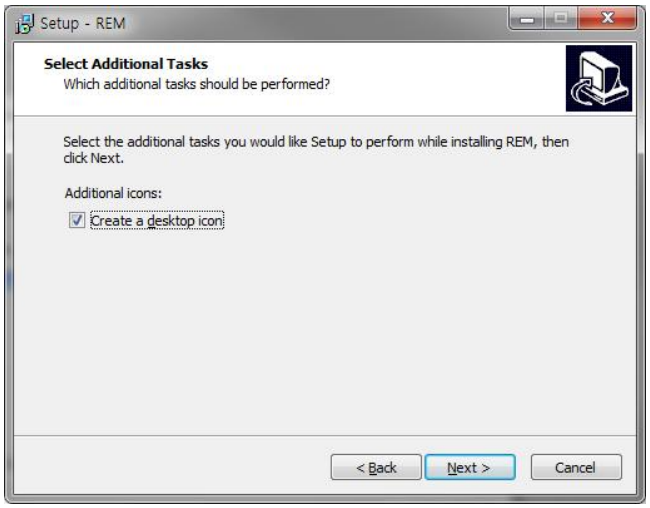
Double click on REMSetup.exe file to start installation procedure. When the following dialog box appears, click Next



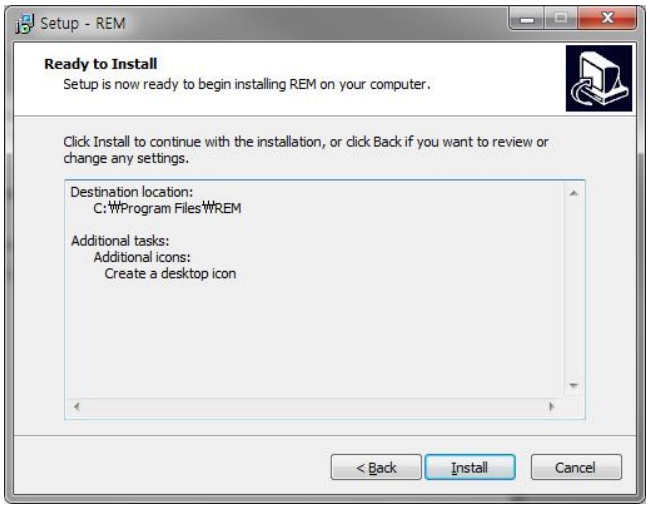
After selecting the program folder and desired option, click Next



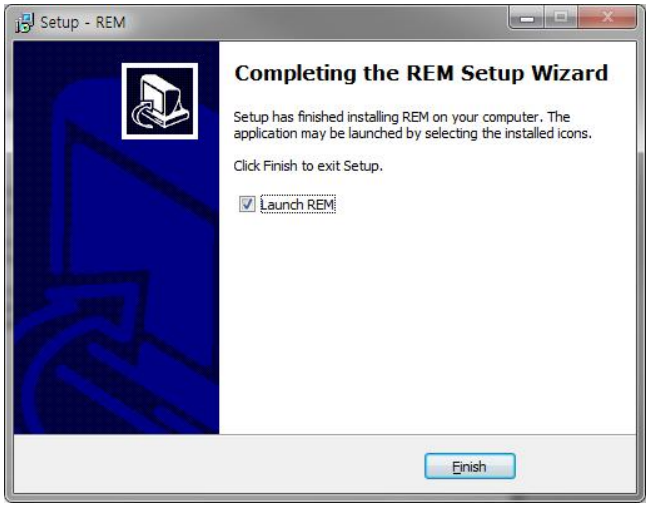
If you would like the software to create a desktop icon, leave "Create a desktop icon" checked and then click Next



When the following dialog box appears, click Next



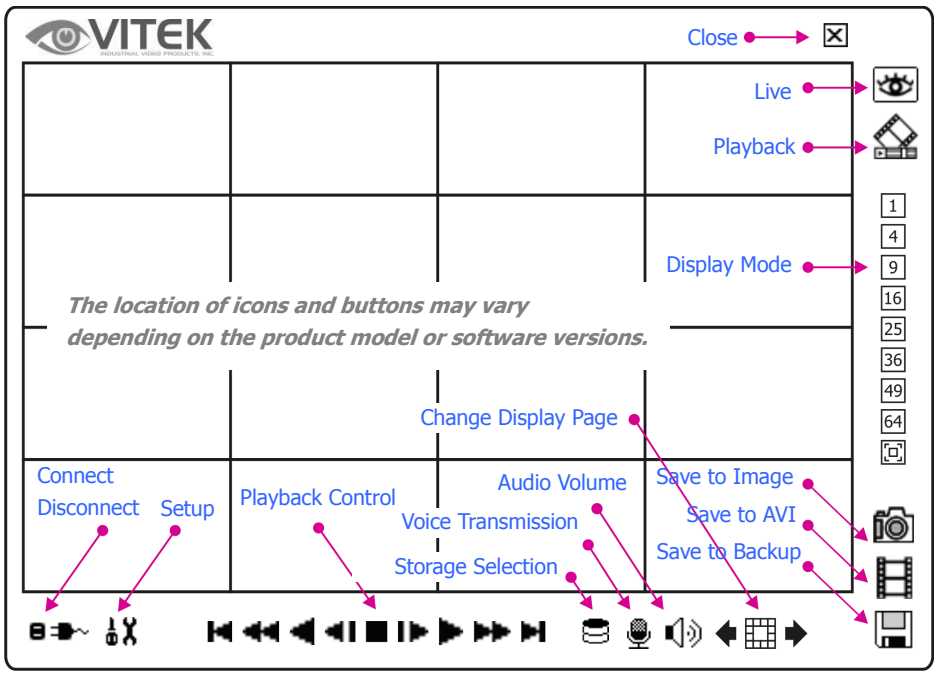
Click Finish to complete installation procedure. Leave "Launch REM" checked if you'd like to launch the software immediately after installation.



2. Using the remote software

2-1. Starting the Software

Double click on 'REM' icon on PC to run the software.
Main screen of the remote software appears as shown below.



Live: Click the image to enter the live mode
Playback: Click the image to enter the playback mode
Display Mode: Select display modes (single screen, 4, 9, 16, 25, 36, 49, 64 and full screen)

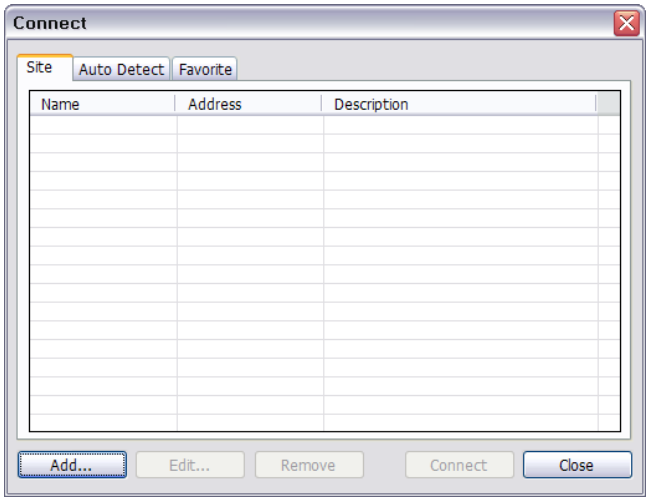
Save to Image: Save the recorded data in Image file format
Save to AVI: Save the recorded data in AVI file format
Save to Backup: Backup the recorded data

Connect / Disconnect: Click button for site setup and connect
Setup: Click button for remote software setup
Playback Control: Use buttons to control playback images (Stop, Move by Image, Play, Rewind/Forward, and Move to First/End)
Change Display Page: Change Display Mode to Previous or Next page in camera order.
Audio Volume: Click Audio icon to select audio volume and mute options.
Select a camera to receive Audio of the selected camera (highlighted in orange lines).
Voice Transmission: Click button to transmit remote voice to the local DVR.
Storage Selection: Choose a HDD to playback if the connected DVR has Archive HDD or Read Only HDD in playback mode.

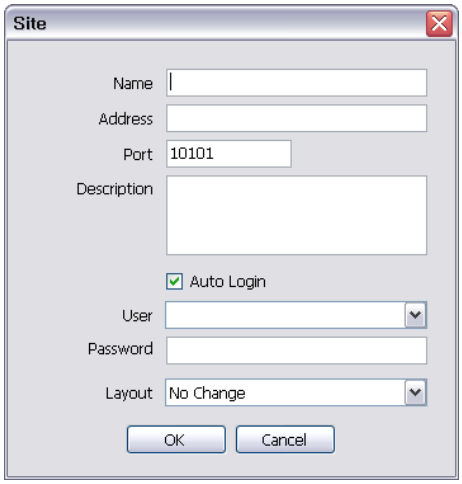
Close: Click the image to close the software

2-2. Site Set Up

Click button to display registered remote locations or add new locations.



Click [Add] button to add remote location and required information.

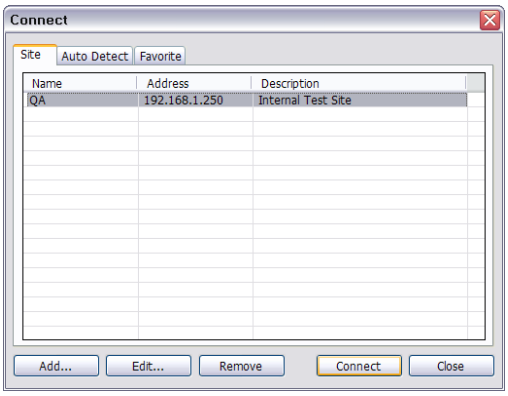


Name: Enter Site Name
Address: Enter IP address or domain name of the site
Port: Enter port number if there is a specific port to be set for the software
Description: Enter the description of the site
Auto Login: If you do not want the Log In window to appear every time you start the remote S/W, check Auto Login to skip User/Password authentication process
User: Select the type of user from the list
Password: Enter the password of DVR
Layout: Select desired display layout for the site when it is connected.

Note: Using the display option in the menu you can change the layout.

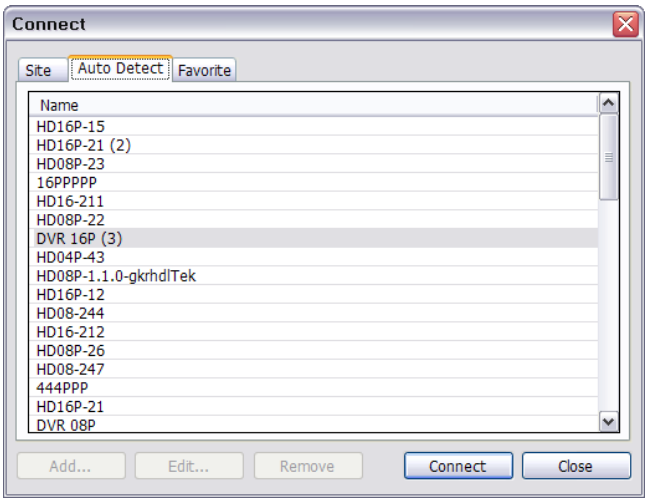
Click [OK] to save information and complete the registration.

Double click the location or Highlight it and click the [Connect] button to get connected to the site.



The DVR and Client program on the PC will start searching each other once they are on the same local network. The Auto Detect menu shows the DVRS detected on the same local network.

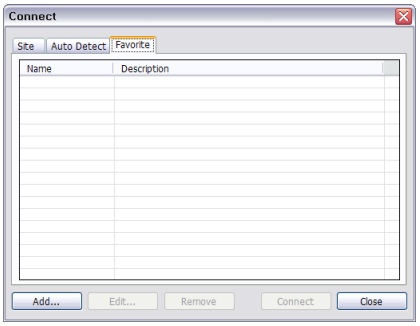
Note: This function is only available on local networks. No settings are required if both DVR and PC use DHCP. But if the Static IPs are used, DVR and PC need to have same subnet info but different static IP addresses.

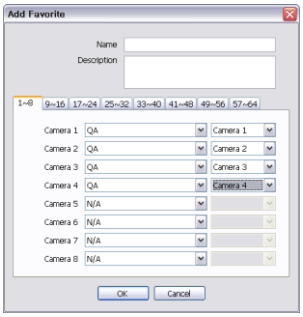


Note: Auto Detect finds DVRs on the local network automatically. To use this function, Apple® Bonjour® needs to be installed on the PC. Please refer to http://www.apple.com/bonjour for more details and download.

2-3. Favorite Set Up

The Favorite function allows for multi site management. Up to 64 different cameras and sites can be monitored and managed on one screen. Click button and select Favorite tap.

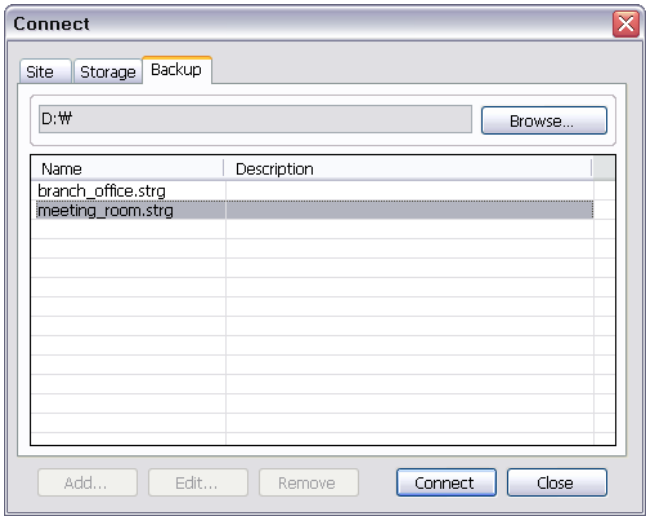




Click [Add] button to group multiple sties as one favorite group.
Enter the group name and description. Up to 64 different cameras or sites can be grouped and displayed together. Select sites and cameras from the drop down list by clicking ▼ button.

Note: Sites should be registered under 'Site' menu before setting the favorite.

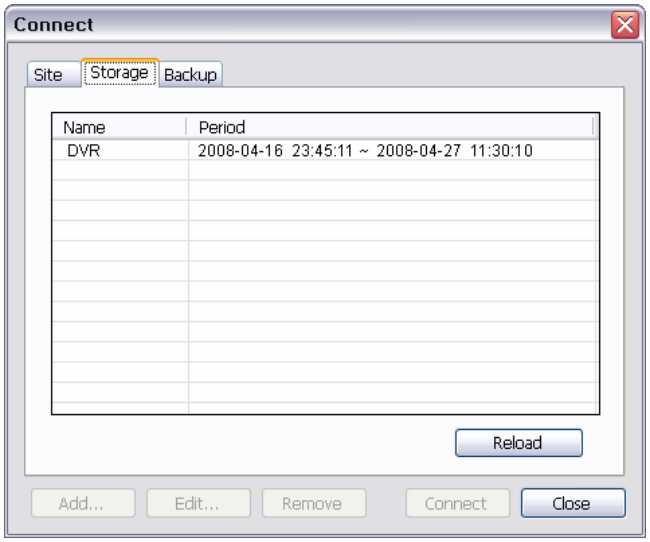
2-4. Play Backup Data



Backed up data from the local site can be played on the remote site.
Select the location where the data is saved. Select the file and click [Connect] to play the video.

Note: Recorded Audio can be played on single screen only.

2-5. Play Independent HDD Data on PC



Independent HDD (removed from a DVR) data can be played on a PC using REM S/W. Have the HDD connected to the PC using a SATA to USB connector cable. Make sure the HDD is connected to the PC properly.

Open REM S/W and Click button.
Click [Storage] to display HDD information (if HDD is not shown please click [Reload] button to refresh the list). Double click the list or highlight and click [Connect] button.

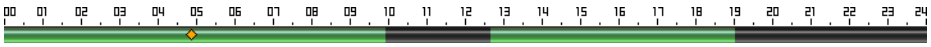
3. Remote Playback

3-1. Calendar Search

• Click on icon on the menu screen to bring up search menu.

• Click for Calendar search. Dates with recorded data will be displayed in bold letters.

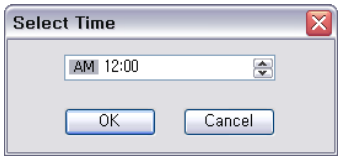
Select the date and use time table to select specific time. Click Play button to start playback.



- Playback Control Button
- Rewind
- Reverse Play
- Beginning
- Step Backward
- Stop
- Step Forward
- End
- Play
- Fast Forward

Go To Time

• Click on icon to display time search window. Enter specific time to search the data.

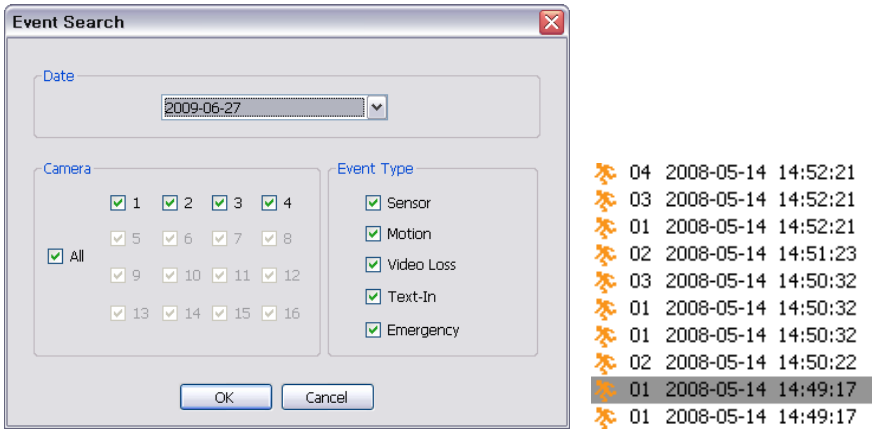


• Click on icon refresh and update the calendar info.

3-2. Event Search

• Click tap to display menu for Event search

• Click to enter event query option.



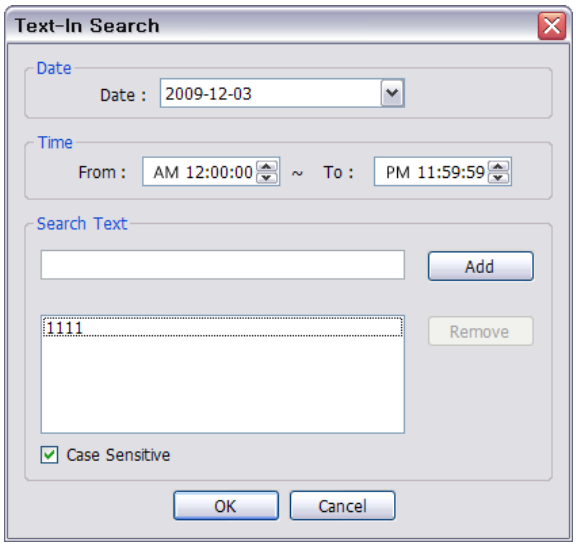
Select an event from the list for playback. Search through the list using ◀ ▶ buttons.

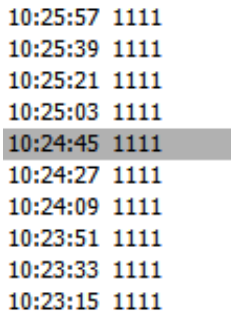
Select the date of the event to search the Date list. Select All or specific camera numbers for related event search. Type of events can be selected from the list for detail and effective search.

3-3. Text-In Search

• Click tap to display menu for Text-In search

• Click to enter text-in query option



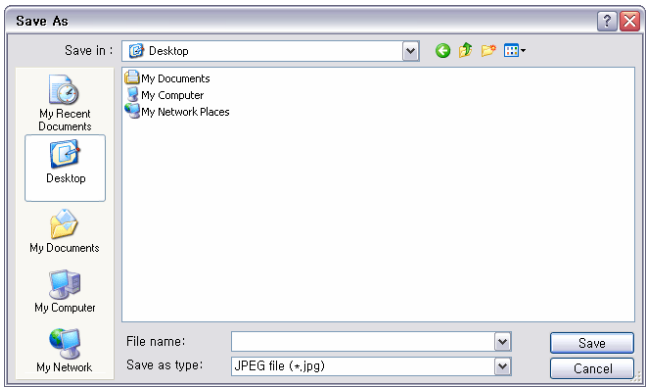


Select a text-in event from the list for playback. Search through the list using ◀ ▶ buttons.

3-4. Saving the recorded data

Save to Image

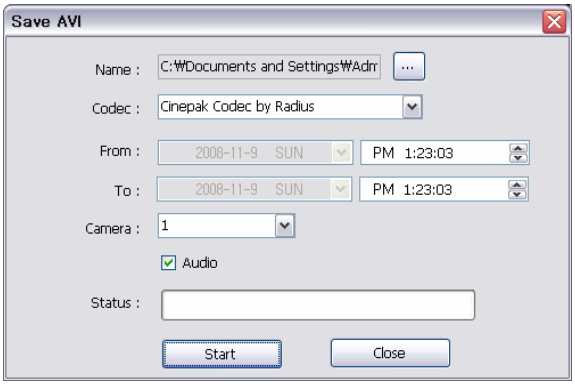
Pause the playback and press button to save the recorded data in Image file format. 'Save As' dialogue box will appear.



- Enter file name and file type.
- The Image can be saved in JPEG, BMP and PNG format.

Save to AVI

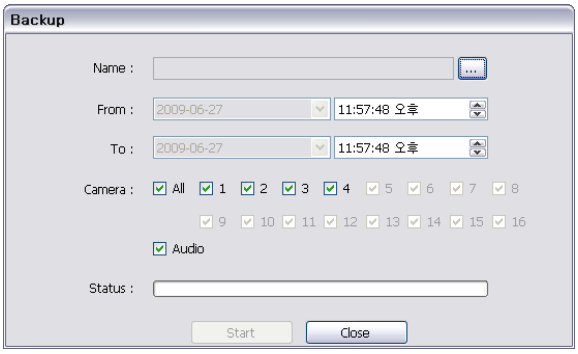
- Pause the playback and press button to save the recorded data in AVI file format. 'Save AVI' dialogue box will appear.



- Enter file name and select Location.
- Select appropriate Codec.
- Select the time period.
- Select Camera number and Audio. Press Start to create AVI file.

Save to Backup

- Pause the playback and press button to backup the recorded data. 'Backup' dialogue box will appear.

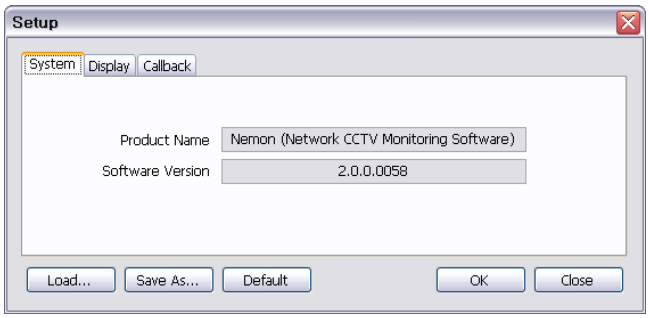


• Enter file name and select the Location.
• Select the time period.
• Select the Camera number and Audio. Press Start to create Backup file.

4. Setup

4-1. REM Setup

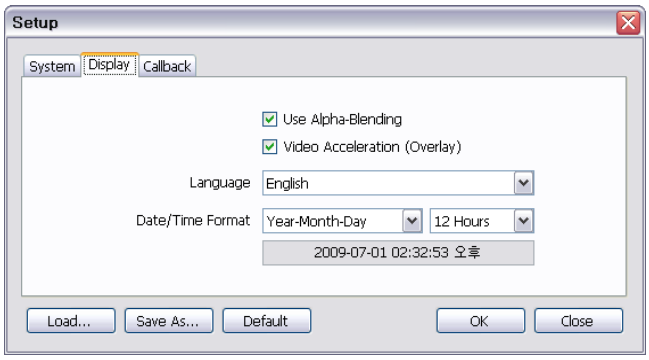
Click on to enter local setup menu.



Product Name: Displays general information of the S/W
Software Version: Displays current S/W version

Load: Load saved data for settings for remote software
Save as: Save current settings of remote software
Default: Set default settings of remote software

Click on display tap to enter remote display setup menu.

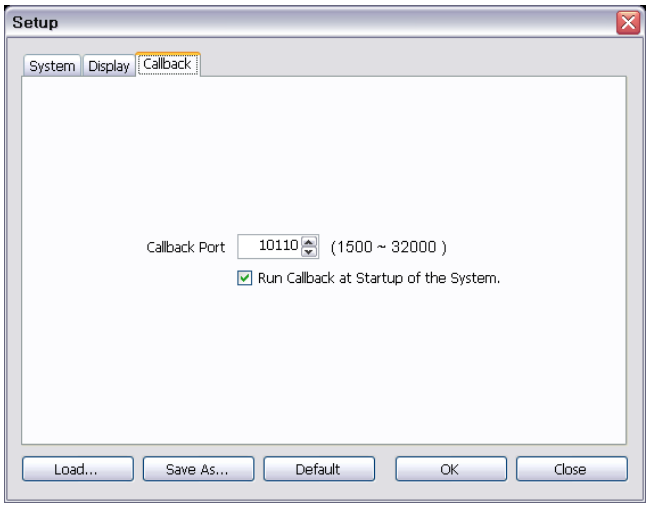


Use Alpha-Blending: Enables alpha-blending effect
Video Acceleration: Video Acceleration option enhances natural live image display on the client S/W. Please do not select this option as it may cause improper live image display. Some PC graphic cards do not support the Video Acceleration option.

Note: There are some graphic cards that do not support such functions. In this case, unselect the option as it might result in abnormal system operation.

Language: Select language option for the remote software
Date/Time Format: Select Date/Time Format for the remote software

Click on Callback tab to enter Callback setup menu.



Please set network ports (1500~32000, default: 10110) for Callback function.

4-2. Remote Setup

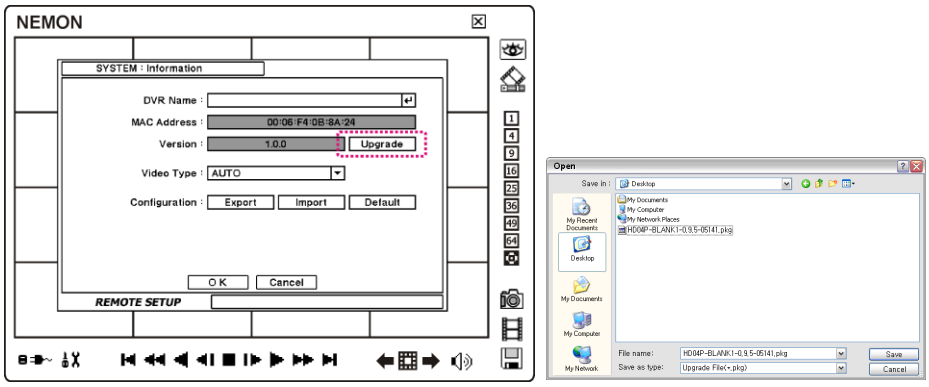
Click to enter remote set up menu.

Single connection (single site): please get a site connected for monitoring first, and click Button.
Favorite connection (multi sites): please click camera or site on the monitoring screen, and click button.

Note: The remote software provides an interactive setup system that allows easy setup of local DVR settings from remote sites. It gets exactly same menu and options as the local system. Therefore please refer to "Chapter 3-2. DVR Configuration" and following chapters for the detailed information.

4-3. Remote Upgrade

The system upgrade can be done through REM program on PC.

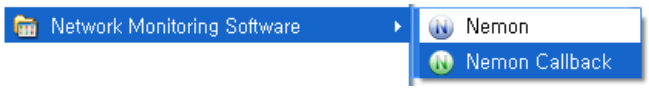


- Select and connect a site for system upgrade
- Click button to get to the setup menu and select Information under System
- Click Upgrade next to S/W version to find a file for upgrade
- Select the file location and the file to upgrade the system

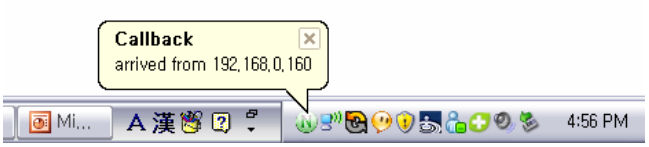
Note: Please do not close down REM S/W or power off a computer until the system upgrade is completed.

5. REM Callback

Start-> Program -> Network Monitoring Software -> REM Callback

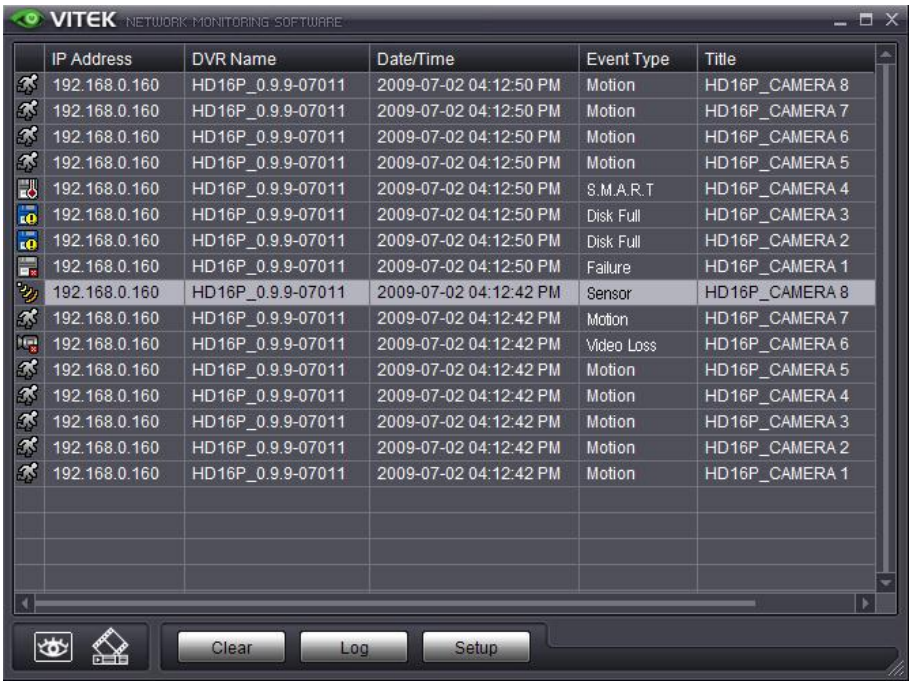


REM Callback icon will be displayed on the bottom right of Window once the program starts.



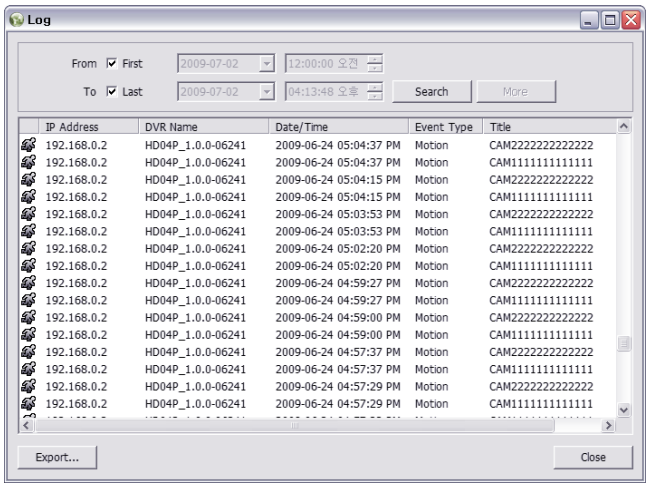
Callback message will be displayed/notify as shown above.

Click REM Callback icon to display main window of Callback as shown below.



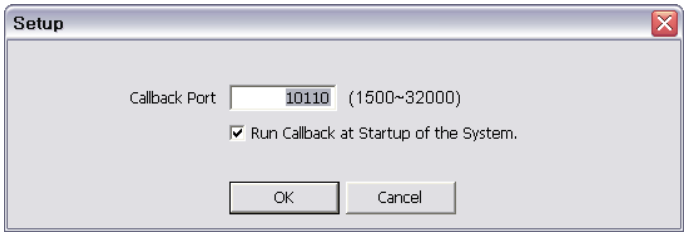
Select a log from the list and click Live or Playback icon to connect related DVR.

Clear: Clear all the logs listed on REM Callback window
Log: Click Log button to display log search window as shown below



Up to 100,000 logs can be saved. 1,000 log lists will be displayed per search. Click 'More' button to display next 1,000 logs. Click Export button to save searched logs in either txt or csv format.

Setup: Click Setup button to set a port for Callback. Check 'Run Callback at Startup of the System' box to start Callback program automatically with Window.



Specifications

Model		VT-CN840	VT-CN1680
Video	In	8 BNC	16 BNC
	Out	1VGA,& 1 BNC Main, 4 Spot Output	
Audio	In	8 RCA (4 Mic in, 4 Line in)	16 RCA(4 Mic in,12 Line in)
	Out	1 RCA (Line Out)	
Device	Sensor In	8 TTL	16 TTL
	Alarm Out	4 Relay + 4 TTL	4 Relay + 12 TTL
	I/O Interface	RS232, RS485, USB2.0 x 3, USB1.1 x 1 for Mouse	
Display	Speed	Real Time	
	Resolution	720 x 480 (NTSC), 720 x 576 (PAL)	
	Split Screen	1,4,9,PIP,Digital Zoom	1,4,9,13,16,PIP,Digital Zoom
Recording	Compression	H.264 Codec	
	Speed / Resolution	240fps@CIF(NTSC) 200fps@CIF(PAL) 120fps@Half D1(NTSC) 100fps@Half D1(PAL) 60fps@D1(NTSC) 50fps@D1(PAL)	480fps@CIF(NTSC) 400fps@CIF(PAL) 240fps@Half D1(NTSC) 200fps@Half D1(PAL) 120fps@D1(NTSC) 100fps@D1(PAL)
	Picture Quality	Very High, High, Standard, Low	
	Mode	Time-lapse, Event, Time & Event, Emergency (Panic)	
Playback	Display	1, 4, 9, Digital Zoom	1,4,9,13,16,Digital Zoom
	Search Mode	Calendar Search, Event Search, Text-In Search, Go to Time	
	Playback Mode	Multi Channel Normal & Reverse Play, RW & FF (x2, x4, x8, x16, x32), Frame to Frame, Pause	
Network	Interface	Ethernet (10/100 Base)	
	Protocol	TCP/IP, HTTP, DHCP	
	Application	Live, Playback, Setup, Notification (Callback, E-Mail)	
	Web Browse	Internet Explorer 7 or higher	
Storage		3xSATA HDD & 1xSATA ODD (or max. 4 SATA HDD w/o ODD)	
Backup		CD & DVD-RW, External HDD(USB), External USB Memory	
Control		Front Panel Button, USB Mouse, IR Remote Controller, Joystick Controller	
OSD		Graphic User Interface (Multilingual)	
Approval		FCC, CE, KCC	
ROHS		ROHS Compliance	
Power Consumption		DC12V, 6.67A (80W)	
Operating Temperature		5°C ~ 40°C / 41°F~104°F	
Operating Humidity		0%~80% / non-condensing	
Dimension		430(W)x88(H)x428(D)mm / 16.93(W)x3.5(H)x16.85(D)inch	
Weight		6Kg / 13lb (without HDD)	

Appendix A. Remote Access Using I.E.

A DVR can be accessed remotely using Internet Explorer. Enter the DVR address (e.g. IP) to get connected.

Remote Log In page appears once it's connected to the DVR. Enter ID, PW and Port information, and select Live or Playback mode to display desired remote control option. Please install Active X when Internet Explorer displays Active X installation message.

Remote Monitoring

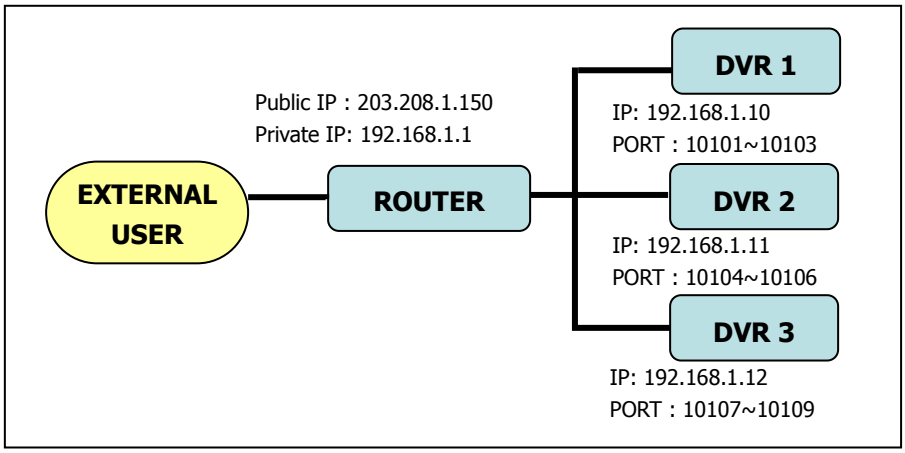
Remote Playback

Please refer to the remote program 'REM' manual if further instructions on the control option are needed.

Note: Web is supported only on Internet Explorer 7.0 or above.

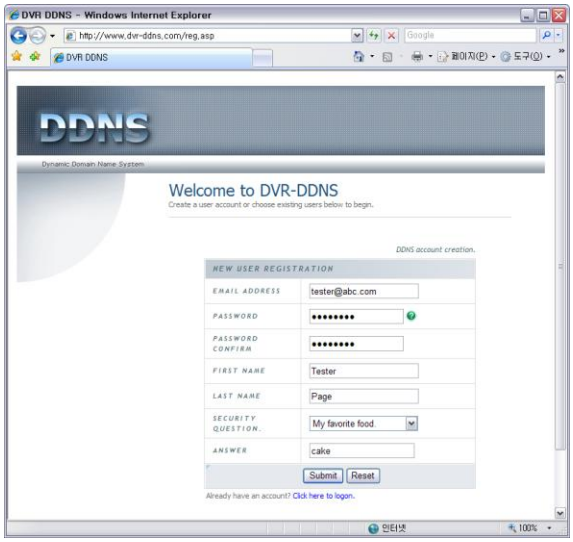
Appendix B. How to set DDNS using a Router
(Except using public IP or connect with ADSL directly)

Please refer to the Diagram and follow instructions. This example illustrates the use of 3 DVRs connected through the local Network.



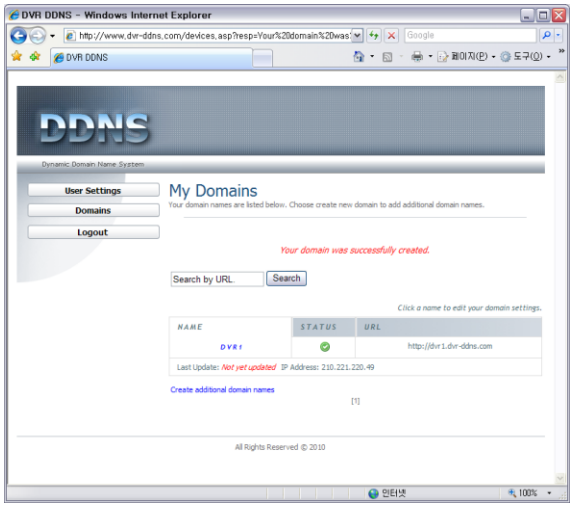
1. Domain Name Creation
- Go to http://www.dvr-ddns.com/
- Click 'Sign up!' to make the Account.

- Fill out the registration information as below.
- Click 'Submit' to make the account.

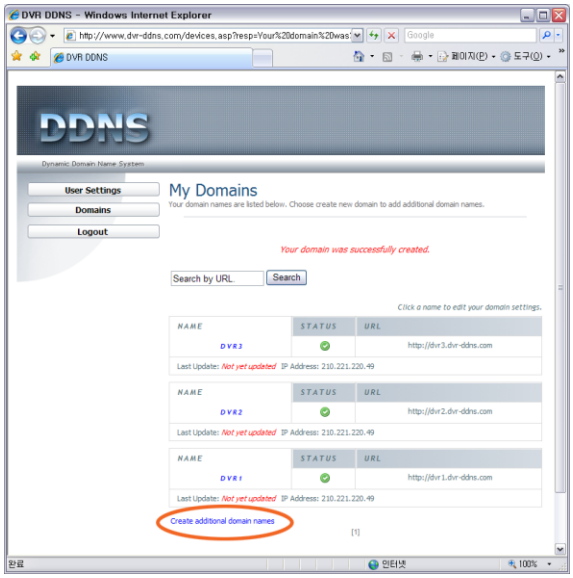


- Enter your domain name and click 'Request Domain' to create the domain name.

- You can see the registered domain name "dvr1.dvr-ddns.com."

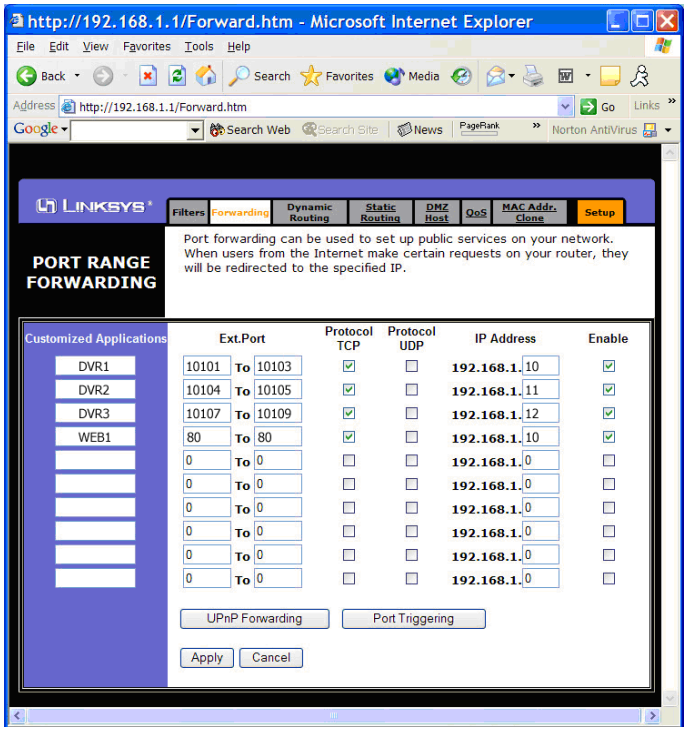


- You can create 3 domain names for one account.
- Click "Create additional domain names" to make another domain name.



2. Router Configuration

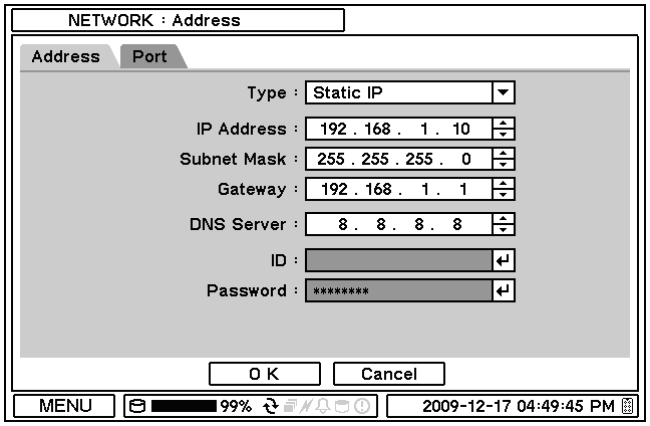
- Insert the gateway address in Internet Explorer to connect the homepage to the Router.
  - Go to "Port Forwarding" Menu. (The picture below is for a particular Router.)



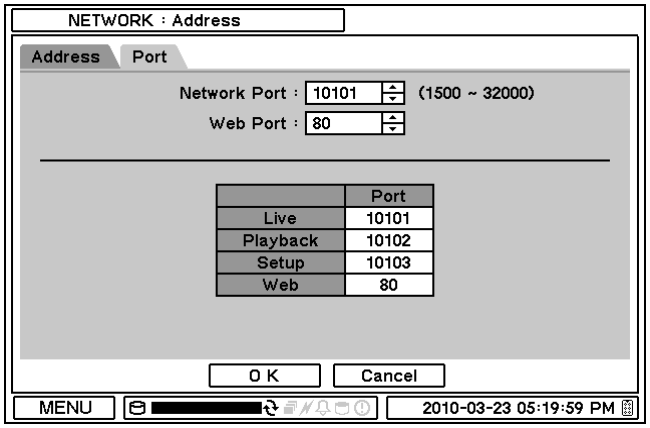
- Insert the IP address and Port number for the DVR in the Port Forward menu.
- The Port number you insert at this point will make it possible to distinguish each of DVRs.
- Specify the WEB port number to access the DVR with Internet Explorer. Default port number is 80.

3. DVR Configuration

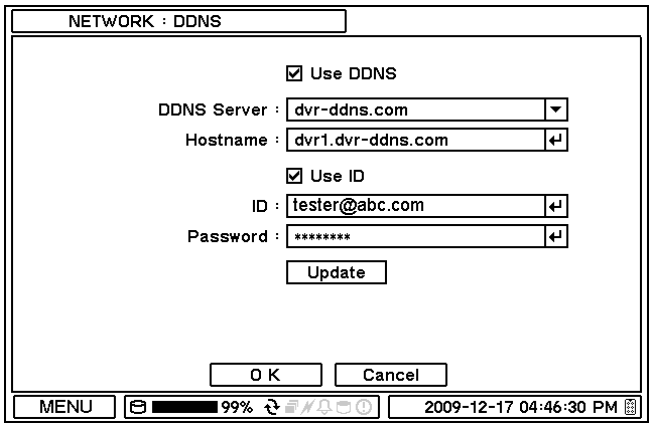
Example of DVR Network setting.



Select Static IP option and enter following options accordingly. The system should be allocated with individual IP address.



Make sure the ports for the DVR are all set accordingly or set network ports according to DVR port settings.



DDNS can be used once the system is registered on DDNS server. ID and PW are required for the registered server authentication.

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THIS CLASS OF DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

WEEE (Waste Electrical & Electronic Equipment)
Correct Disposal of This Product (Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

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ROHS Compliance

VT-KBD1

Xpress 3-Axis Keyboard Controller for Xpress PTZs

- 3-Axis 64 Step Variable-Speed Joystick
- Auto Focus with Manual Override
- Large 1 1/2" x 5 3/16" LCD display
- Control up to 256 Devices including Xpress Domes and VITEK Saga Series Digital Video Recorders
- Digital Flip to follow objects (Enable/Disable)
- 3 X 6 Programmable function keys
- Recall 8 Pre-Programmed tours
- Recall up to 248 Preset Positions
- Built-in RS-485/422 half-duplex mode supports up to 64 devices. Simplex mode supports up to 256 devices.
- Real-time Clock

VT-PTZ10

Ultra-Compact PTZ Camera with 10x Optical Zoom (Flush Mnt Config.)

- Built-In 3.8-38mm Lens with 10x Optical / 10x Digital Zoom.
- High Performance 1/4" CCD with 500 TV Lines.
- True Day/Night function with ICR.
- 128 Presets programmed with view direction, zoom, and BLC.
- 4 Patterns record and play back user preference of surveillance path up to 120° sec.
- 8 Scans: 8 speed steps from slow to medium panning with smooth Diagonal Scan.
- 4 Tours: Each tour consists up to 32 Presets, Patterns, and/or Scans.
- Fully Gasketed IP68 Rated Weatherproof Design
- 4 Alarm inputs with 1~4 priority / 1 Auxiliary output with programmable NC & NO.
- 8 Privacy Zones: Video off or up to 8 masked blocks
- 64 steps of variable speed from 0.4°/sec to 90°/sec. Max manual speed 190°/sec with Turbo key pressed, Preset speed is 380°/sec.
- Built-in RS-485 receiver driver.
- Built-in power-line surge protection and lightning protection.
- Optional Wall Mount, Indoor/Outdoor pendant housing.

VTM-LCD194P

19” Professional LCD Monitor with VGA, HDMI & Dual Looping BNC’s

- 19" LCD Display Panel
- VGA, Dual Looping BNC Composite, and HDMI Video Inputs & Stereo Audio Input
- Resolution up to 1280 X 1024
- Contrast Ratio of 800:1
- Front Panel Controls
- VESA 100mm Standard Mounting
- 50,000 Hour Panel Life
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VITEK LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. Digital recording and storage products are also warranted for (3) years except for the hard drives which carry their own independent factory warranty from the hard drive manufacturer. VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is non-transferable and extends only to the original buyer or end user customer of a VITEK Authorized Reseller.

The product must have been used only for its intended purpose, and not been subjected to damage by misuse, willful or accidental damage, caused by excessive voltage or lightning.

The product must not have been tampered with in any way or the guarantee will be considered null and void.

This guarantee does not affect your statutory rights.

Contact your local VITEK Reseller should servicing become necessary.

VITEK makes no warranty or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a VITEK Authorized Reseller.

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